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Données sur les sédiments

1985

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PREFACE

This publication was prepared by personnel of the Sediment Survey Section, Water Survey of Canada Division, under the direction of the Director, Water Resources Branch, Department of the Environment, Ottawa.

The basic data were collected and compiled under the supervision of the Regional Chief of the Water Resources Branch at Winnipeg, Manitoba.

The co-operation received from provincial agencies and from other organizations is gratefully acknowledged.

PRÉFACE

Le groupe d'étude des sédiments de la Division des relevés hydrologiques du Canada, sous l'autorité du directeur des Ressources en eau du ministère de l'Environnement, à Ottawa, a préparé la présente publication.

Le chef régional de la Direction des ressources en eau, à Winnipeg (Manitoba), a supervisé la collecte et la compilation des données de base.

Nous remercions vivement les organismes provinciaux, ou autres, pour leur collaboration.

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INTRODUCTION

The Water Resources Branch of the Department of the Environment herein presents for the 1985 calendar year the annual suspended sediment data and a historical data summary for the sediment survey investigations conducted in Manitoba by the Water Survey of Canada.

Data on the character and quantity of fluvial sediments provided by sediment survey investigations are intended for use in studies of water quality, environmental impacts, river processes and behaviour, and engineering design.

General introductory information on the sediment survey is included in this publication. Similar information for the associated hydrometric survey is given in the regular publications containing surface water data.

Details on individual stations and related records, as well as recent data that have not yet been published, may be obtained upon application to:

Regional Chief,
Water Resources Branch,
Department of the Environment,
521 Federal Building,
269 Main Street,
Winnipeg, Manitoba.
R3C 1B2

or to the Director, Water Resources Branch, Department of the Environment, Ottawa, Ontario, K1A 0E7.

INTRODUCTION

Dans la présente publication de la Direction des ressources en eau du ministère de l'Environnement, on trouvera les données annuelles sur les sédiments en suspension pour 1985 et le sommaire des données chronologiques sur les sédiments, à la suite des études effectuées dans les cours d'eau du Manitoba par la Division des relevés hydrologiques du Canada.

Les données recueillies sur la nature et l'importance de la charge solide dans les cours d'eau doivent servir aux études portant sur la qualité des eaux, les incidences environnementales, les processus fluviaux, le comportement des cours d'eau et la conception de projets.

La presente publication contient des renseignements généraux préliminaires sur les études des sédiments. Des renseignements semblables sur les études hydrométriques connexes sont contenus dans les publications régulières présentant des données sur les eaux de surface.

On peut obtenir des renseignements supplémentaires sur les stations et les relevés, ainsi que des données récentes non encore publiées, en s'adressant au:

Chef régional
Direction des ressources en eau
Ministère de l'Environnement
521, Édifice fédéral
269, rue Main
Winnipeg (Manitoba)
R3C 1B2

ou au directeur des Ressources en eau, ministère de l'Environnement, Ottawa (Ontario), K1A 0E7.

SCOPE OF PUBLICATION

Descriptive information about sediment stations is given. This refers to the Location, Latitude and Longitude, Drainage Area and whether the flow is Natural Flow or Regulated Flow (the year that regulation began is given, if known), Type of Gauge and the Total Suspended Sediment Load in Tonnes for the Period of Record is also included. International Gauging Stations are identified and the names of co-operating agencies who supply data are given; unusual conditions at the sediment station that could affect the data results are explained under "Remarks".

This publication contains data on streamflow, instantaneous suspended sediment concentration; daily mean suspended sediment concentration; daily suspended sediment loads; dissolved solids concentration; load summary; particle-size distribution of suspended sediment in percent sand, silt and clay; bed load and bed material; water temperature when samples were collected; type of sampler and the single sampling vertical location.

A historical sediment data summary includes such information as Sampled Concentration Maximum and Minimum; Suspended Sediment Load Maximum Daily and the Total for Period. The Period of Record and the Type of Operation for each year of data are also given. A Summary for the Months of record gives the Period of Record Mean, the Mean for Period of Record and the Standard Error of Mean as a percent.

HISTORY AND OBJECTIVES OF SEDIMENT SURVEYS IN CANADA

In Canada, investigations of sediment transported by streams were first undertaken by individual organizations or agencies in 1948, to meet the needs of federal and provincial agencies for assessment of particular projects. Although the investigations were extended to meet expanding needs after 1948, it was not until 1961 that a systematic survey was undertaken by the Water Resources Branch.

The sediment survey program has the following objectives:

(1) Collection and provision of data related to sediment transport in Canadian rivers for applications in water resource engineering, water quality and environmental studies.

(2) Provision of information and advice related to sediment transport.

(3) Assessment, improvement and standardization of equipment and techniques used in Canada's sediment survey program.

PORTÉE DE LA PUBLICATION

Des données descriptives sont présentées sur les stations d'étude des sédiments. Elles concernent leur emplacement, leurs latitude et longitude, leur bassin versant, la nature de débit (naturel ou régularisé, avec indication, le cas échéant, de l'année où la régularisation a commencé, si elle est connue), le type d'instrument de mesure employé et le débit total des sédiments en suspension (en tonnes) pour la période de relevé. Les stations internationales de jaugeage sont indiquées, ainsi que le nom des organismes qui fournissent les données. Des explications concernant des conditions exceptionnelles qui ont pu influer sur les résultats sont présentées dans la partie «Remarques».

Cette publication renferme des données sur le débit des cours d'eau, les concentrations instantanées de sédiments en suspension, les concentrations journalières moyennes de sédiments en suspension, les débits journaliers de sédiments en suspension, les concentrations de matières dissoutes, les débits solides totaux (résumés), la granulométrie des sédiments en suspension exprimée en pourcentage de sable, de limon et d'argile, le charriage et les matériaux du lit, la température de l'eau au moment de l'échantillonnage, le type d'échantillonneur employé et l'emplacement des verticales de prélèvement d'échantillons uniques.

Un résumé des données historiques sur les sédiments est inclus. On y trouve divers renseignements comme les concentrations maximale et minimale mesurées, le débit journalier maximal des sédiments en suspension et le total pour la période. La période de relevé et le type d'exploitation des stations sont indiqués pour chaque année. Dans un résumé pour les mois de relevé, on donne la moyenne pour chaque période et pour l'ensemble des périodes de relevé ainsi que l'erreur-type de la moyenne, en pourcentage.

HISTORIQUE ET OBJECTIFS DES ÉTUDES DES SÉDIMENTS AU CANADA

Au Canada, les études dans ce domaine ont débuté en 1948 en réponse aux besoins exprimés par certains organismes fédéraux et provinciaux pour l'évaluation de projets donnés et étaient le fait d'organismes privés. Bien que les études se soient poursuivies après 1948 pour satisfaire aux besoins accrus, ce n'est qu'en 1961 que la Direction des ressources en eau les a entreprises de façon systématique.

Les buts de ces études sont de:

(1) réunir et produire des données sur les transports solides dans les cours d'eau canadiens, données dont on peut avoir besoin pour des études concernant l'environnement, la qualité des eaux et la conception de projets portant sur les ressources en eau.

(2) produire des informations concernant les transports solides.

(3) évaluer, améliorer et uniformiser le matériel et les techniques employés dans le programme d'étude des sédiments au Canada.

PUBLICATION OF SURFACE WATER AND SEDIMENT DATA

Sediment data have been published in a variety of formats since the beginning of the Sediment Survey Program.

During the years 1948 to 1960, some sediment data were collected for several Prairie rivers to meet the needs of particular projects. The first Water Resources Paper series containing sediment data incorporated a selection of these data and also data for part of the year ending September 30, 1961, at stations established for the continuing program. The second issue was a biennial publication covering only the continuing program for the 1962 and 1963 water years. All subsequent editions titled *Sediment Data Canadian Rivers* have been published annually. The sediment data since 1978 have been presented entirely in the International System of Units (SI).

Commencing with 1984, the *Sediment Data* were published in a new format wherein Canada was divided into eight regions. The provinces each represent a separate region except for New Brunswick, Newfoundland, Nova Scotia and Prince Edward Island, which together form the Atlantic Provinces region, and the Yukon and Northwest Territories which make up another. The publications are identified by the province or territories covered and the year in which the data were collected. These data are published annually on a calendar-year basis and the stations are listed alphabetically.

The first edition of a *Sediment Data Reference Index* was published for data to 1972. It contains a tabulation of locations in Canada where sediment data were collected by the Water Survey of Canada. The index has been subdivided alphabetically by province or territory, with sediment survey stations also listed alphabetically. Commencing with the 1978 publication, data are presented in the International System of Units (SI) and will continue to be published biennially. The latest edition supersedes all previous editions because it contains any corrections or additions since the last publication.

The first edition of a new publication series titled *Historical Sediment Data Summary for Canadian Rivers* was produced for data to 1974. This publication contains a summary of historical monthly and annual mean suspended sediment load, and annual extremes of daily suspended sediment concentration and loads and total annual suspended load. Commencing with the 1978 publication, data are presented entirely in the International System of Units (SI). This publication has been discontinued, as much of the information is now included in the new annual *Sediment Data* publication.

PUBLICATION DES DONNÉES SUR LES EAUX DE SURFACE ET LES SÉDIMENTS

Depuis le début du programme d'étude des sédiments, la présentation des données a varié.

De 1948 à 1960, on a recueilli des données pour plusieurs cours d'eau des Prairies en prévision de la réalisation de certains projets. La première publication contenant des données sur les sédiments a paru dans la série intitulée *Water Resources Paper*; elle présentait un choix de ces données ainsi que des données recueillies en 1961 avant le 30 septembre à des stations établies pour la réalisation du programme permanent. La deuxième publication a porté sur les données recueillies dans le cadre du programme au cours des années hydrologiques 1962 et 1963. Par la suite, les données ont été publiées annuellement sous le titre *Données sur les sédiments - rivières canadiennes*. Depuis 1978, les données sont exprimées en unités du Système international (SI).

En 1984, la présentation des *Données sur les sédiments* a été modifiée. Le Canada a été divisé en huit régions, une région pour chaque province, sauf le Nouveau-Brunswick, Terre-Neuve, la Nouvelle-Écosse et l'Île-du-Prince-Édouard qui, ensemble, forment la région des provinces de l'Atlantique, et les Territoires du Yukon et du Nord-Ouest, qui forment une autre région. Les publications sont nommées selon la région couverte et l'année des données (année civile). Ces publications sont annuelles. Les stations y sont présentées par ordre alphabétique.

Un *Index de référence des données sur les sédiments* est publié. La première édition portait sur les données disponibles jusqu'en 1972. Les emplacements où des données sur les sédiments ont été recueillies au Canada par la Division des relevés hydrologiques y sont présentés sous forme de tableau. L'*Index* est subdivisé selon l'ordre alphabétique par province ou territoire, et les stations de mesure des sédiments sont classées par ordre alphabétique. À partir de 1978, les données sont exprimées en unités du Système international (SI). L'*Index* est publié tous les deux ans; l'édition la plus récente annule toutes les éditions antérieures, car elle renferme toutes les corrections et mises à jour effectuées depuis la dernière parution.

Une autre série de publications a porté le titre *Sommaire chronologique des données sur les sédiments de rivières canadiennes*. La première édition renfermait les données disponibles jusqu'en 1974. Cette série présentait un résumé donnant les moyennes mensuelles et annuelles historiques du débit des sédiments en suspension, les valeurs annuelles extrêmes de la concentration journalière et du débit journalier des sédiments en suspension et le débit annuel total des sédiments en suspension. À partir de 1978, les données ont été présentées en unités du Système international (SI). Cette série a été abandonnée, car une bonne partie de l'information est maintenant contenue dans la nouvelle publication annuelle intitulée *Données sur les sédiments*.

COLLECTION AND PROCESSING OF BASIC DATA

1. *Equipment and Instrumentation*

The sediment survey program of the Water Resources Branch is conducted in cross sections on rivers selected specifically for the sediment survey or for the hydrometric survey. Certain cross sections are located at traffic bridges, while others are equipped with cableways, or automatic pump samplers.

The following sediment samplers have been used in the sediment survey program:

(a) Depth-integrating suspended sediment wading-type hand sampler, USDH-48, used on small streams or during winter periods.

(b) Depth-integrating suspended sediment sampler, USDH-59, used as a handline suspension for small and medium size streams.

(c) Depth-integrating suspended sediment samplers, USD-49, and USD-74, used on a reel suspension for medium and large streams whose depths are less than five metres.

(d) Point-integrating suspended sediment samplers, USP-61, USP-61-A1, USP-63, and USP-72, used for point-integrating sampling, or depth-integrating sampling if the depth is over five metres, or in a cross section with velocities up to two metres per second.

(e) Automatic pump sampler is an automatic pumping system permitting unattended collecting and bottling of individual water samples pumped from a fixed point in a stream. This sampler is normally installed at isolated locations where otherwise no data would be available during ice break-up or peak periods.

(f) Bed material sampler, USBM-54, used on large or deep streams or on those streams with hard-packed streambeds.

(g) Bed material sampler, USBMH-60, used on some large or deep streams or on those streams with soft-packed streambeds.

(h) Bed material sampler, USBMH-53, used on some small or shallow streams.

(i) Lane bed material sampler, a drag-type sampler used on small streams or those with soft streambeds.

2. *Hydrometric Surveys*

The hydrometric survey includes the standard procedures for observations of water levels, streamflow measurements, water surface slope determinations if required, and observations of water temperature. The streamflow measurements are made in conjunction with the sediment load measurements and conform to the accepted standards of the regular hydrometric survey.

3. *Sediment Sampling Program*

The following is a summary of the elements associated with the Sediment Sampling Program:

(a) Periodic measurement of suspended sediment load by the

COLLECTE ET TRAITEMENT DES DONNÉES DE BASE

1. *Matériel*

L'étude des sédiments réalisée par la Direction des ressources en eau porte sur des sections transversales de cours d'eau choisis spécialement à cette fin ou pour les relevés hydrométriques. Certaines sections sont situées sous un pont, d'autres sont accessibles par téléphérique, ou sont étudiées à l'aide d'un échantillonneur sous pression.

On a utilisé les échantillonneurs suivants:

(a) L'échantillonneur intégrateur selon la profondeur, type simple, USDH-48, employé dans les cours d'eau peu profonds ou en hiver;

(b) L'échantillonneur intégrateur selon la profondeur USDH-59, utilisé comme une ligne dans les cours d'eau petits et moyens;

(c) Les échantillonneurs intégrateurs selon la profondeur USD-49 et USD-74 fixés au bout d'une corde s'enroulant autour d'un moulinet et employés dans les cours d'eau gros ou moyens dont la profondeur est inférieure à cinq mètres;

(d) Les échantillonneurs intégrateurs USP-61, USP-61-A1, USP-63 et USP-72, employés ponctuellement ou sur toute la verticale, et utilisés lorsque la profondeur est supérieure à cinq mètres ou dans les sections transversales qui connaissent un débit qui atteint 2 m/s.

(e) Un échantillonneur automatique permettant le prélèvement en bouteilles, sans surveillance, d'échantillons uniques d'eau obtenus à l'aide d'une pompe en un point précis d'un cours d'eau; il est ordinairement installé dans un endroit isolé où aucune donnée ne pourrait être obtenue autrement au cours de la débâcle ou des périodes de débit de pointe;

(f) L'échantillonneur USBM-54 employé pour le prélèvement d'échantillons des matériaux du lit dans les cours d'eau importants ou profonds ou dans les cours d'eau dont le fond est dur;

(g) L'échantillonneur USBMH-60 employé pour le prélèvement d'échantillons des matériaux du lit dans certains cours d'eau importants ou profonds, ou dans les cours d'eau dont le fond est meuble;

(h) L'échantillonneur USBMH-53 employé pour le prélèvement d'échantillons des matériaux du lit dans certains cours d'eau petits ou peu profonds;

(i) La drague employée pour le prélèvement d'échantillons des matériaux du lit dans de petits cours d'eau ou dans des cours d'eau dont le fond est meuble.

2. *Relevés hydrométriques*

Le relevé hydrométrique comprend, entre autres, l'observation de la hauteur des eaux, la mesure du débit de l'eau, la détermination de la pente de la ligne d'eau, si nécessaire, ainsi que l'observation de la température de l'eau. Les mesures du débit de l'eau et du débit des sédiments se font conjointement, suivant les méthodes acceptées.

3. *Échantillonnage des sédiments des cours d'eau*

L'échantillonnage comporte, en gros, les éléments suivants:

(a) La mesure périodique du débit des sédiments en suspension par la méthode d'intégration sur toute la profondeur

depth-integrating method for determining the average suspended sediment concentration in the cross section.

(b) Single suspended sediment samples at a selected vertical for determining the sediment concentration for the days when suspended sediment load measurements are not taken.

(c) Limited measurement of suspended sediment load by the point-integrating method for checking depth-integrated measurements and for determining particle-size distribution in the cross section.

(d) Sampling of bed material for determining particle-size distribution.

(e) Periodic measurement of bed load.

The following is a brief explanation of the elements listed above:

(a) *Suspended Sediment Load by Depth-Integrating Method*: Measurements are made by the depth-integrating method to determine the suspended sediment load in the entire cross section of a stream, the average suspended sediment concentration in the cross section, and the size distribution of the sediment particles. It is known that the concentration of suspended sediment tends to increase from the water surface to the streambed and could vary from streambank to streambank.

When making suspended sediment equal-discharge-increment (EDI) measurements, the stream cross section is divided into at least five equal-flow panels and a representative suspended sediment sample is collected from each portion. For each panel of the cross section, the suspended sediment load (r) may then be computed by multiplying the flow (q) by the suspended sediment concentration (c):

$$r = q\ c$$

The suspended sediment load (R) for the cross section may be computed by adding the sediment loads for the five equal-flow panels:

$$R = r\ n = q_1c_1 + q_2c_2 + \ldots + q_nc_n$$

The depth-integrating method of sampling is used to measure the suspended sediment concentration. This method is based on the premise that the sampler fills at a rate proportional to the velocity of the approaching flow, and that by traversing the depth of a stream at a uniform speed, the sampler will receive a portion of water sediment mixture at every point in the vertical.

(b) *Single Suspended Sediment Samples at a Selected Vertical*: Single suspended sediment samples, consisting of two bottles each, are collected routinely using the depth or point-integrating samplers at a permanently fixed vertical in a cross section. During periods of very heavy sediment concentration, two or three single sediment samples may be taken per day, while during periods of low concentration, one single sediment sample may only be taken every few days. During extremely low flow periods, the sampling may be limited to one single sample in several weeks or months.

(c) *Suspended Sediment Load by Point-Integrating Method*: A limited number of suspended sediment load measurements are made by the point-integrating method. These measurements are included in the program (a) to check by comparison the "measured" sediment loads obtained by the depth-integrating method with the suspended sediment loads by the point-integrating method and (b) to obtain samples from which to determine particle-size distribution

pour la détermination de la concentration moyenne dans une section transversale;

(b) Le prélèvement d'échantillons uniques des sédiments en suspension selon une verticale choisie, afin de déterminer la concentration des sédiments les journées où le débit des sédiments en suspension n'est pas mesuré;

(c) Un nombre restreint de mesures du débit des sédiments en suspension avec intégration en un point précis d'un cours d'eau, afin de vérifier les résultats des mesures avec intégration selon la profondeur et afin de déterminer la granulométrie des particules de sédiments dans une section transversale d'un cours d'eau;

(d) L'échantillonnage des matériaux du lit afin d'en déterminer la granulométrie;

(e) La mesure périodique du charriage.

Voici une brève description des éléments susmentionnés.

(a) *Mesure du débit des sédiments en suspension par intégration selon la profondeur*: La méthode permet de déterminer le débit des sédiments en suspension traversant toute une section transversale d'un cours d'eau, la concentration moyenne des sédiments en suspension dans la section transversale et la granulométrie des sédiments en suspension. C'est un fait connu que la concentration des sédiments en suspension augmente généralement avec la profondeur et qu'elle peut varier d'une rive à l'autre d'un cours d'eau.

Avec la méthode d'incréments de débits égaux (IDE), la mesure du débit des sédiments en suspension se fait en divisant une section transversale d'un cours d'eau en au moins cinq tranches où le débit est égal et en prélevant un échantillon représentatif dans chacune d'elles. Le débit des sédiments en suspension (r) pour chaque tranche se calcule en multipliant le débit (q) par la concentration des sédiments en suspension (c):

$$r = q\ c$$

Le débit des sédiments en suspension (R) pour la section transversale est la somme des débits des sédiments des cinq tranches:

$$R = r\ n = q_1c_1 + q_2c_2 + \ldots + q_nc_n$$

La méthode par intégration sur toute la profondeur est employée pour mesurer la concentration des sédiments en suspension. Elle suppose que l'échantillonneur se remplit à un rythme proportionnel au débit de l'eau et qu'en étant déplacé à une vitesse uniforme sur toute la verticale, il reçoit une partie du mélange eau-sédiments à tous les points de celle-ci.

(b) *Prélèvement d'échantillons uniques de sédiments en suspension sur une verticale choisie*: De tels échantillons, constitués chacun de deux bouteilles, sont prélevés régulièrement à l'aide d'appareils intégrateurs, selon la profondeur ou ponctuels, sur une verticale permanente d'une section transversale. Lorsque la concentration des sédiments est très forte, deux ou trois échantillonnages peuvent être effectués chaque jour, alors qu'un seul échantillon peut être prélevé à quelques jours d'intervalle lorsqu'elle est faible. Au cours des périodes où le débit est extrêmement faible, l'échantillonnage peut être limité à un échantillon toutes les quelques semaine ou tous les quelques mois.

(c) *Mesure du débit des sédiments en suspension par la méthode ponctuelle*: Un nombre limité de mesures du débit des sédiments en suspension sont faites avec cette méthode. On y a recours a) pour vérifier les valeurs du débit mesurées au moyen de la méthode précédente et b) pour obtenir des échantillons en vue de déterminer la granulométrie des sédiments en divers points de la

at different points in the cross section. The point-integrating sediment loads are computed by graphical methods.

The relationship between the suspended sediment concentration of the single vertical samples and the average concentration in the cross section determined from the suspended sediment load measurements is established for some stations. Using this relationship, the sediment concentrations of the single vertical samples are adjusted to reflect the average suspended sediment concentration in the cross section. These average sediment concentrations in the cross sections are plotted, and a smooth curve is drawn through the points to obtain a concentration graph. This graph represents the average suspended sediment concentration for the period of record. The daily mean concentrations are determined by automated procedures using a digitizer interfaced with a Digital minicomputer.

The daily suspended sediment loads are computed on the basis of stream discharges and the collected suspended sediment concentrations. The daily suspended sediment loads are expressed in tonnes per day and are obtained by multiplying the daily mean sediment concentration (mg/L), by the daily mean discharge (m^3/s), and the conversion factor, 0.0864.

(d) *Bed Material Sampling*: In a cross section, bed material samples are usually taken in the same sampling verticals as the suspended sediment samples. Often, additional bed material samples are collected at the water edge, the extreme water level or at other points in the cross section. The total number of bed material samples taken in a cross section usually varies between five and nine.

(e) *Bed Load Measurement*: There are several methods available for measurement of bed load (volumetric method, measurement by samplers, method of tracers, method of constricted cross section, study of sound waves, etc.). The measurement methods should be selected in accordance with river regime.

4. *Total Sediment Load*

Sediment transport may be divided into two categories: sediment maintained in suspension in the stream (suspended load), and sediment being carried along the streambed (bed load). To measure the total sediment load, each of these must be measured separately and then totalled. The total sediment load was not computed for this publication.

5. *Sediment Survey Laboratories*

The Water Resources Branch maintain sediment survey laboratories in New Westminster, British Columbia; Regina, Saskatchewan; Guelph, Ontario; and Moncton, New Brunswick. The laboratories are equipped to perform the following analyses:

(a) determination of sediment concentration by (1) filtration method, (2) evaporation method and (3) determination of total dissolved solids by evaporation method.
(b) particle-size distribution analysis by (1) bottom withdrawal tube method, (2) sieving and (3) hydrometer method.

Determination of the sediment concentration by the evaporation method is carried out by evaporating the water from the settled sediment sample, with the results being corrected for dissolved solids. The quantity of dissolved solids is determined by evaporating a portion of the decanted water of a sample. In the filtration method, the suspended sediment concentration of water samples is determined by utilizing Gooch crucibles with a Reeve Angel 934AH filter and a Millipore AP20 prefilter and a vacuum system.

section transversale. Cette méthode fait appel à des graphiques pour le calcul du débit des sédiments.

Le rapport entre la concentration des sédiments en suspension dans les échantillons prélevés sur une seule verticale et la concentration moyenne dans la section transversale, telle que déterminée à partir des mesures du débit des sédiments en suspension, est établi pour quelques stations. Il permet de corriger les concentrations mesurées à une seule verticale de manière à donner la concentration moyenne dans la section transversale. Les concentrations moyennes ainsi déterminées sont reportées sur un graphique, et une courbe lisse passant par les points marqués est tracée. Le graphique obtenu représente la concentration moyenne des sédiments en suspension pour la période de relevé. Les concentrations moyennes quotidiennes sont déterminées automatiquement à l'aide d'un convertisseur analogique-numérique relié à un mini-ordinateur numérique.

Les valeurs journalières du débit des sédiments en suspension sont calculées à partir du débit du cours d'eau et des concentrations des sédiments en suspension recueillis. Elles sont exprimées en tonnes par jour. On les détermine en multipliant la concentration moyenne journalière des sédiments (mg/L) par le débit moyen journalier (m^3/s) et par un facteur de conversion approprié, 0.0864.

(d) *Échantillonnage des matériaux du lit*: Dans une section transversale, les échantillons des matériaux du lit sont ordinairement prélevés aux mêmes verticales que ceux des sédiments en suspension. Souvent, des échantillons supplémentaires sont pris près des rives, là où le niveau d'eau est extrême et à d'autres points de la section transversale. Leur nombre total pour une section donnée varie ordinairement entre cinq et neuf.

(e) *Mesure du charriage*: La mesure peut se faire par plusieurs méthodes (méthode volumétrique, mesure à l'aide d'échantillonneurs, méthode des traceurs, méthode de la section transversale rétrécie, étude des ondes sonores, etc.). Le choix se fondera sur la nature du régime du cours d'eau.

4. *Débit solide total*

Il y a deux catégories de sédiments: les sédiments maintenus en suspension au sein de l'eau (sédiments en suspension), et les sédiments charriés sur le lit d'un cours d'eau (charriage de fond). Les deux types de sédiments doivent être mesurés séparément et leurs valeurs additionnées si on veut mesurer le débit total des sédiments. Toutefois, on ne l'a pas calculé aux fins de la présente publication.

5. *Laboratoires d'analyse*

La Direction des ressources en eau possède des laboratoires d'analyse des sédiments à New Westminster (Colombie-Britannique), Regina (Saskatchewan), Guelph (Ontario) et Moncton (Nouveau-Brunswick). Les laboratoires disposent des appareils nécessaires pour effectuer les analyses suivantes:

(a) la détermination de la concentration des sédiments par (1) filtration, (2) évaporation, et (3) détermination des matières dissoutes totales par évaporation.
(b) l'analyse granulométrique (1) par extraction des sédiments déposés dans un tube, (2) par l'emploi de tamis et (3) par l'utilisation d'un hydromètre.

La méthode par évaporation consiste à faire évaporer l'eau d'un échantillon de sédiments décanté et à corriger les résultats pour tenir compte des matières dissoutes. La quantité de celles-ci est déterminée en faisant évaporer une partie de l'eau de l'échantillon décanté. Dans la méthode par filtration, on utilise sous vide des creusets de Gooch munis d'un filtre Reeve Angel 934AH et d'un préfiltre Millipore AP20.

Particle-size analysis was carried out for some suspended sediment samples having gross weights in the range of 0.15 to 5 g using the Bottom Withdrawal Tube method. The particle-size distribution of the Bottom Withdrawal Tube method ranges from 0.002 to 1.000 mm. The Sieve analysis method may be used for samples with a large amount of material coarser than 0.062 mm.

The particle-size classification used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)
Clay	0.000 24 - 0.004
Silt	0.004 - 0.062
Sand	0.062 - 2.0
Gravel	2.0 - 64.0

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analyzed in distilled water. Chemical dispersion is not used for native-water analysis.

6. *Accuracy and Reliability of Field Data and Computed Results*

The overall accuracy and degree of reliability of the sediment data is dependent upon many factors. Some of the more important of these are:

(a) accuracy and reliability of streamflow records;
(b) regime of the river;
(c) type of sampling equipment used to collect the suspended sediment samples;
(d) frequency of suspended sediment discharge measurements;
(e) frequency of individual sampling;
(f) quality of the relationship between the average suspended sediment concentration in the cross section and the concentration of the individual samples;
(g) frequency and method of bed material sampling;
(h) frequency and method of bed load measurements;
(i) accuracy and reliability of the laboratory analysis;
(j) selected methods of computation of the suspended sediment discharge;
(k) interpretation and extrapolation of sediment records.

An assessment of the quality of the records can be made by an examination of the occurrence of the symbol (S) on the daily mean concentrations.

In general, data collected during open-water periods are more reliable than those collected during periods of ice conditions or those records obtained by estimation. Further, water level data collected utilizing a water-stage recorder are more reliable and accurate than those using a manual gauge only, especially for small or flashy streams.

Une analyse granulométrique a été effectuée pour certains échantillons de sédiments en suspension ayant un poids brut dans l'intervalle de 0.15 à 5 g par la méthode de la burette (extraction des sédiments déposés, à divers intervalles). La distribution de la taille des particules déterminée par cette méthode varie de 0.002 à 1.000 mm. La méthode de tamisage peut être employée pour les échantillons ayant une forte quantité de particules de taille supérieure à 0.062 mm.

La classification granulométrique qui est utilisée dans la présente publication est conforme aux recommandations faites par l'*American Geophysical Union Subcommittee on Sediment Terminology*. La classification est la suivante:

Classification	Taille (mm)
Argile	0.000 24 - 0.004
Limon	0.004 - 0.062
Sable	0.062 - 2.0
Gravier	2.0 - 64.0

La répartition granulométrique qui est fournie dans cette publication, n'est pas obligatoirement représentative de toutes les particules qui sont transportées par un cours d'eau donné. La plupart des matières organiques sont extraites de l'échantillon qui est ensuite soumis à une dispersion mécanique et chimique avant d'être analysé dans de l'eau distillée. La dispersion chimique ne sert pas à l'analyse de l'eau naturelle.

6. *Exactitude des données et des résultats*

L'exactitude des données sur les sédiments dépend de nombreux facteurs. On peut citer, parmi les plus importants:

(a) l'exactitude des données sur les débits;
(b) le régime d'un cours d'eau;
(c) le type d'appareil d'échantillonnage utilisé pour prélever les échantillons de sédiments en suspension;
(d) la fréquence des mesures du débit des sédiments en suspension;
(e) la fréquence des échantillonnages isolés;
(f) la qualité du rapport entre la concentration moyenne des sédiments en suspension dans une section transversale et la concentration des échantillons isolés;
(g) la fréquence des échantillonnages des matériaux de fond et la méthode utilisée;
(h) la fréquence des mesures du charriage de fond et la méthode utilisée;
(i) l'exactitude des analyses de laboratoire;
(j) les méthodes de calcul du débit des sédiments en suspension;
(k) l'interprétation et l'extrapolation des données sur les sédiments.

La qualité des données peut être évaluée d'après la fréquence d'utilisation du symbole (S), avec les données sur la concentration journalière moyenne.

En général, les données recueillies au cours des périodes d'eau libre sont plus sûres que celles qui sont obtenues au cours des périodes de glaces ou par estimation. De plus, les données sur le niveau des eaux qui sont mesurées à l'aide d'un limnigraphe sont plus certaines et plus exactes que celles qui sont mesurées à l'aide d'une jauge manuelle seulement, surtout dans le cas des petits cours d'eau ou des cours d'eau à crues très rapides.

METHOD OF TABULATION OF SEDIMENT DATA

For stations where the suspended sediment load was obtained, the following data are given where available:

1. The table of *Suspended Sediment Load* includes the daily mean discharge in cubic metres per second, the daily mean concentration in milligrams per litre, and the daily suspended sediment load in tonnes per day. The total monthly discharge and total monthly sediment load are also given for each month of record.

   For stations where the sediment load in tonnes per day are produced for complete or partial years, the *Total Suspended Load* for the period is given in the descriptive information.

   For stations where only suspended sediment concentrations are obtained, the table of *Suspended Sediment Load* will not be given.

   Additional descriptive information about the sediment station is also given and will indicate the following, where applicable.

   Location – the latitude and longitude co-ordinates of the location of the gauge are given. For stations where the gauge is located an appreciable distance from the discharge measurement section, these co-ordinates give the location of the discharge measurement section.

   Drainage area – refers to that area enclosed by a topographic divide such that direct surface runoff from precipitation would drain by gravity into the stream upstream from the location of the station.

   Type of Flow – where the flow is known to be natural, this is indicated. The flow of water in many river systems is affected by upstream regulation. In some cases, the extent of this regulation is not known and therefore is not indicated. However, where the regulation is known to be "appreciable", this is indicated as well as the year that the regulation began, if known.

   Type of Gauge – refers to the installation or method used to obtain water level or discharge data:

   (a) Manual – a non-recording type of gauge from which observations of stage normally are obtained once daily.

   (b) Recording – a water-stage recorder from which continuous water levels are obtained on an analog chart. For most International Gauging Stations located in the United States, water level records are obtained utilizing a digital recorder.

   International Gauging Station – on waters adjacent to the international boundary, certain gauging stations have been

PRÉSENTATION DES TABLEAUX DE DONNÉES SUR LES SÉDIMENTS

Pour les stations de mesure du débit des sédiments en suspension, les données suivantes sont présentées, pour autant qu'elles sont disponibles:

1. Le tableau concernant le *débit des sédiments en suspension* (The table of Suspended Sediment Load) donne le débit journalier moyen de l'eau, en mètres cubes par seconde, la concentration journalière moyenne, en milligrammes par litre, et le débit journalier des sédiments en suspension, en tonnes par jour. Chaque mois les données indiquent également les débits mensuels totaux de l'eau et des sédiments.

   Dans le cas des stations où le débit des sédiments, en tonnes par jour, est fourni pour une année complète ou une partie de l'année, le total pour la période est indiqué.

   Dans le cas des stations où seule la concentration des sédiments en suspension est obtenue, ce tableau est absent.

   Des renseignements descriptifs additionnels au sujet de la station sont également présentées. On peut y apporter les précisions suivantes:

   Emplacement (Location) – La latitude et la longitude de la station de jaugeage sont indiquées. Dans les cas où l'équipement de mesure est situé à une bonne distance de la section où le jaugeage est effectué, on indique les coordonnées de cette section.

   Superficie du bassin versant (Drainage area) – Désigne la zone délimitée par une ligne de faîte de sorte que l'écoulement de surface direct provenant des précipitations est entraîné par gravité vers le cours d'eau, en amont de la station.

   Type de débit (Type of Flow) – Un débit reconnu comme naturel est indiqué. Le débit de nombreux réseaux hydrographiques est modifié par une régularisation effectuée en amont. Dans certains cas, l'importance de cette régularisation n'est pas connue, et elle n'est donc pas indiquée. Cependant, quand on sait que la régularisation est d'une certaine importance, on l'indique, ainsi que l'année où elle a débuté (si elle est connue).

   Type de jauge (Type of Gauge) – Il s'agit des jauges ou des méthodes de jaugeage utilisées pour obtenir les données sur le niveau ou le débit d'un cours d'eau.

   (a) *Manuel* (Manual) – Indique qu'un appareil non enregistreur est employé pour obtenir normalement une fois par jour les données sur le niveau et le débit du cours d'eau.
   (b) *Enregistreuse* (Recording) – Indique qu'un limnigraphe permet de mesurer de façon continue le niveau des eaux qui est tracé sur un graphique. La plupart des stations internationales de jaugeage des États-Unis obtiennent les données sur le niveau des eaux à l'aide d'un enregistreur numérique.

   Station internationale de jaugeage (International Gauging Station) – Dans les eaux contiguës aux frontières, on a

designated as "International" and records are approved jointly. Differences between figures published herein and corresponding figures in United States Water Supply Papers are due to variations in automated data processing techniques.

Contributed Data – if data were supplied in their entirety or partially by an outside agency, the name of this co-operating agency is given.

Remarks – contains a statement pertaining to the sediment sample collection.

2. The table of *Instantaneous Suspended Sediment Concentration* for depth-integrating samples includes the following: Date and Time of the sample collection; Water Temperature; Instantaneous Discharge at time of sampling, (if not available the daily mean discharge is given and indicated by a symbol); Single Sampling Vertical location; Dissolved Solids; Percent Sand, Silt and Clay; Type of Sampler used. The particle-size distribution of Sand, Silt and Clay, in percent is given where available.

The Single Sampling Vertical Location is defined by many symbols, which are as follows, where applicable:

DIGITS - 5, 14, 130, etc., is the distance in metres from the initial point
WERB - Water's Edge RIGHT Bank
WELB - Water's Edge LEFT Bank
1QRB - One-quarter the distance FROM the RIGHT Bank
3QRB - Three-quarters the distance FROM the RIGHT Bank
1QLB - One-quarter the distance FROM the LEFT Bank
3QLB - Three-quarters the distance FROM the LEFT Bank
MID - MID STREAM
MULT - Composite sediment measurement

For the suspended sediment measurements, the Date; Time; Water Temperature at time of sampling; Discharge computed for each sampling panel; Concentration; Sampling Vertical; Dissolved Solids; Percent Sand, Silt and Clay; Type of Sampler used; and the Particle-size distribution of the Sand, Silt and Clay, in percent is given where available.

3. The table of *Point Integrating Particle-size of Suspended Sediment* includes the following: Date and Time of the sample collection; Water Temperature; Panel Discharge for each sampling vertical; Sampling Vertical; Depth of Sample; Concentration of Sample in milligrams per litre; Dissolved Solids, in milligrams per litre, and the Particle-size distribution in percent of the Sand, Silt and Clay are also given.

désigné certaines stations comme «internationales», et les données obtenues sont approuvées par les pays concernés. Les différences entre les chiffres publiés dans la présente publications et dans les *United States Water Supply Papers* sont dues à des variantes dans les techniques de traitement automatique des données.

Données fournies (Contributed Data) – Lorsqu'un organisme extérieur a fourni toutes les données ou une partie des données, son nom est indiqué.

Remarques (Remarks) – Renseignements au sujet du prélèvement des échantillons de sédiments.

2. Le tableau des *concentrations instantanées de sédiments en suspension* (The table of Instantaneous Suspended Sediment Concentration) pour les échantillons obtenus par intégration selon la profondeur comprend: la date et l'heure de prélèvement; la température de l'eau; son débit instantané au moment de l'échantillonnage (s'il n'est pas connu, le débit journalier moyen, avec symbole); l'emplacement de la verticale d'échantillonnage; la concentration des matières dissoutes; les pourcentages de sable, de limon et d'argile; le type d'échantillonneur employé; et la granulométrie du sable, du limon et de l'argile, en pourcentage des particules est donnée lorsqu'elle est disponible.

Le site vertical d'échantillonnage unique est défini par plusieurs symboles dont les suivants dans certains cas :

CHIFFRE - 5, 14, 130, etc., désigne la distance en mètres à partir du point initial
WERB - Bord de l'eau, rive DROITE
WELB - Bord de l'eau, rive GAUCHE
1QRB - Un quart de la distance À PARTIR de la rive DROITE
3QRB - Trois quarts de la distance À PARTIR de la rive DROITE
1QLB - Un quart de la distance À PARTIR de la rive GAUCHE
3QLB - Trois quarts de la distance À PARTIR de la rive GAUCHE
MID - MI-DÉBIT
MULT - Mesure des sédiments mixtes

Pour les mesures des sédiments en suspension, la date, l'heure, la température de l'eau au moment de l'échantillonnage, le débit calculé pour chaque tranche de la section d'échantillonnage, la concentration et la verticale d'échantillonnage, la concentration des matières dissoutes; les pourcentages de sable, de limon et d'argile; le type d'échantillonneur employé; et la granulométrie du sable, du limon et de l'argile, en pourcentage des particules est donnée lorsqu'elle est disponible.

3. Le tableau de la *granulométrie des échantillons ponctuels et intégrés des sédiments en suspension* (The table of Point Integrating Particle-size of Suspended Sediment) comprend: la date et l'heure de prélèvement de l'échantillon, la température de l'eau, le débit de la tranche de la section pour chaque verticale d'échantillonnage, la verticale d'échantillonnage, la profondeur de l'échantillon, la concentration des échantillons, en milligrammes par litre, la concentration des matières dissoutes, en milligrammes par litre, et granulométrie du sable, du limon et de l'argile.

4. The table of *Bed Load Particle-size* includes the following: Date and Time of the sample collection; Panel Discharge; Sampling Vertical and the Type of Sampler used in the collection of the sample and the Particle-size distribution, in percent, for each sample of bed load collected.

5. The table of *Bed Material Particle-size* includes the following: Date and Time of the sample collection; Panel Discharge; Sampling Vertical and the Type of Sampler used in the collection of the sample and the Particle-size distribution, in percent, for each sample of bed material collected.

6. The table of *Historical Sediment Data Summary* gives the following, for the period of record, where applicable.

   (a) Record Summary
   (b) Type of Sampling
   (c) Sampled Concentration, maximum and minimum
   (d) Suspended Sediment Load, maximum daily and the total, for the period, in tonnes
   (e) Summary, including mean load, the historical mean load and the standard error of the mean in percent.

(a) The *Record Summary* gives the months of record that data are available. If the complete month is on file the symbol (C) is shown, while partial months of data are indicated by the symbol (P). Months with no data on file are indicated by (-).

(b) The *Type of Sampling* indicates the type of sampling method used to collect the sediment samples during the period of operation. If the samples were collected by manual methods this is indicated by "MANUAL." If the samples were collected by a pump sampler or some other automatic method this is indicated by "AUTO." If both manual and automatic sampling methods were used this is indicated by "DUAL."

(c) The *Sampled Concentration* gives the maximum and minimum concentration, in milligrams per litre, and the date of collection for each year of record. The extreme recorded for the period of record is indicated by an asterisk (*).

(d) The *Suspended Sediment Load* gives the maximum daily load, in tonnes, and the date of occurrence. The extreme recorded is indicated by an asterisk (*). The Total for the Period gives the total load for the period or year, in tonnes. The extreme recorded is also indicated by an asterisk (*). A load which has been revised since the previous publication is marked with the symbol (R) for Revision.

4. Le tableau de la *granulométrie des sédiments charriés* (The table of Bed Load Particle-size) comprend: la date et l'heure de prélèvement de l'échantillon, le débit de la tranche de la section, la verticale d'échantillonnage et le type d'échantillonneur employé et le pourcentage des particules pour chaque échantillon recueilli du charriage.

5. Le tableau de la *granulométrie des matériaux du lit* (The table of Bed Material Particle-size) comprend: la date et l'heure de prélèvement de l'échantillon, le débit de la tranche de la section, la verticale d'échantillonnage et le type d'échantillonneur employé et le pourcentage des particules pour chaque échantillon recueilli.

6. Le tableau du *sommaire chronologique des données sur les sédiments* (The table of Historical Sediment Data Summary) donne, pour la période pour laquelle les données sont disponibles, les renseignements suivants lorsque de telles données existent:

   (a) Le sommaire du relevé
   (b) Le type d'échantillonnage
   (c) Les concentrations mesurées, maximum et minimum
   (d) Le débit des sédiments en suspension, maximum quotidien et le total pour la période en tonnes
   (e) Résumé, comprend le débit moyen, le débit moyen chronologique et l'erreur type de la moyenne en pourcentage.

(a) Le *sommaire du relevé* donne les mois de relevé pour lesquels les données sont disponibles. Le symbole (C) indique que les données sont disponibles pour tout le mois. Le symbole (P) indique que ces données ne sont disponibles que pour une partie du mois. Enfin, on indique par (-) les mois qui n'ont pas de données.

(b) Le *type d'échantillonnage* indique le type de méthode d'échantillonnage que l'on utilise dans le prélèvement des échantillons de sédiments pendant la période d'exploitation. Si le prélèvement des échantillons se fait par des méthodes manuelles, on indique «MANUEL». Si le prélèvement des échantillons se fait au moyen d'échantillonneur à pompe ou par quelque autre méthode automatique, on indique «AUTO». Si on utilise à la fois des méthodes d'échantillonnage manuelles et automatiques, on indique «DOUBLE».

(c) Pour les *concentrations mesurées* (Sampled Concentration), on donne la concentration maximale et la concentration minimale, en milligrammes par litre, et leur date d'obtention pour chaque année de relevé. La valeur extrême enregistrée est indiquée par un astérisque (*).

(d) Sous le *débit des sédiments en suspension* (Suspended Sediment Load), on donne le débit journalier maximal, en tonnes, et sa date de mesure. Le débit extrême enregistré est indiqué par un astérisque (*). Le débit total pour la période ou pour l'année est indiqué. La valeur extrême est également signalée par un astérisque (*). La lettre R indique qu'une valeur du débit a été révisée depuis la dernière publication.

(e) The *Summary* gives the *Mean Load* and the *Historical Mean Load* in tonnes.

The *Standard Error of the Mean* % is calculated using the following equations:

$$SEM = \frac{S}{\bar{x}\sqrt{n}} \times 100\%$$

and

$$S = \sqrt{\frac{\Sigma (x - \bar{x})^2}{n - 1}}$$

where SEM is the Standard Error of the Mean.

- S is the Standard Deviation of the annual mean loads.
- x is the annual Mean Load variable.
- $\bar{x}$ is the Historical Mean Load or the arithmetic mean of the annual Mean Loads.
- n is the number of years for which there is an annual Mean Load.

For stations with only instantaneous samples, this table will not include the *Suspended Sediment Load* or the statistical information in the *Summary*.

CO-OPERATION AND ACKNOWLEDGMENTS

Co-operative undertakings with other agencies form an important part of the activities of the Water Survey of Canada. Close co-operation has been maintained with public agencies and private organizations concerned with water resources. Data have been mutually exchanged and suspended sediment collection operations have been facilitated by the assistance received from a number of organizations.

On waters adjacent to the International Boundary, certain sediment stations are maintained by Canada (or the United States) under agreement with the United States (or Canada) and the records are collected and compiled in a manner equally acceptable to both countries. These stations are designated as "International Gauging Stations" in this publication.

For the valuable assistance and co-operation received in obtaining sediment survey records, the Water Survey of Canada is indebted to other federal and provincial organizations which are noted as contributing agencies in the summary for the year. A list of these agencies may be found in the *Sediment Data Reference Index*.

MICROFICHE

All sediment data are available in metric units on microfiche, upon request. The data are stored in station number order by province. There are 270 frames per microfiche at 48X reduction; there is a visible heading showing the fiche number, type of data, province, beginning and ending station number and year of data, and the month/year the fiche was created. The last frame is an index of the contents of that fiche.

(e) Le *résumé* donne le *débit moyen* et le *débit moyen chronologique*, en tonnes.

L'*erreur-type de la moyenne* % (Standard Error of the Mean), est calculée à l'aide des équations suivantes:

$$SEM = \frac{S}{\bar{x}\sqrt{n}} \times 100\%$$

et

$$S = \sqrt{\frac{\Sigma (x - \bar{x})^2}{n - 1}}$$

où SEM est l'erreur type de la moyenne.

- S est l'écart type des débits moyens annuels.
- x est la variable du débit moyen annuel.
- $\bar{x}$ est le débit moyen chronologique ou la moyenne arithmétique des débits moyens annuels.
- n est le nombre d'années où il y a un débit moyen annuel.

Dans le cas des stations ne prélevant que des échantillons instantanés, ce tableau ne donnera pas le *débit des sédiments en suspension* ni les données statistiques du *résumé*.

COOPÉRATION ET REMERCIEMENTS

Le travail entrepris en coopération avec d'autres organismes représente une partie importante des activités de la Division des relevés hydrologiques du Canada. On a maintenu une étroite collaboration avec les organismes, publics ou privés, qui s'intéressent aux ressources en eau. On a échangé des données sur les sédiments, et l'assistance fournie par certains organismes a facilité les opérations d'échantillonnage des sédiments en suspension.

Dans les eaux adjacentes à la frontière internationale, les stations dépendent du Canada ou des États-Unis selon l'accord intervenu entre les deux pays, et les relevés sont faits et compilés de façon à satisfaire les deux pays. Ces stations sont nommées «Stations internationales de jaugeage» dans la présente publication.

La Division des relevés hydrologiques du Canada est redevable à plusieurs organismes fédéraux et provinciaux, dont les noms apparaissent dans le sommaire de l'année, de l'aide et de la collaboration qu'ils lui ont apportées pour l'obtention des données sur les sédiments. On trouvera également les noms des organismes qui ont fourni des données dans l'*Index de référence des données sur les sédiments*.

MICROFICHE

Toutes les données sur les sédiments sont disponibles sur microfiche en unités métriques. Ces données sont emmagasinées par ordre de numéro de station et par province. Chaque microfiche renferme 270 pages réduites de 48X. L'en-tête indique le numéro de la fiche, le genre de données, la province, le numéro de la première et de la dernière station, la première et la dernière année des données ainsi que le mois et l'année de création de la fiche. La dernière image donne l'index de la fiche.

DEFINITION OF TERMS

The following definitions are given to clarify the terms used in this publication:

Automatic pump sample is an individual water-sediment mixture pumped from a fixed point in a stream.

Bed load is that material moving in almost continuous contact with the streambed, being rolled or pushed along the bottom by the force of the water.

Bed material is the sediment mixture of which the streambed is composed.

Daily load is the suspended sediment load expressed in tonnes for a particular day. The daily load is obtained by multiplying the daily mean sediment concentration (mg/L) by the daily mean discharge (m^3/s) and the conversion factor, 0.0864.

Daily mean concentration is a time-weighted mean value and is computed from a manually constructed concentration curve. The mean concentration value may be determined arithmetically or graphically. The arithmetic mean is obtained either by (1) selecting values from the concentration graph that represents uniform intervals of time and taking the arithmetic average or by (2) selecting values from the graph that represent unequal intervals of time and weighing these values by the time intervals represented by the concentrations. For graphical explanation refer to *Office Procedures for Sediment Data Computations* and for the automated graphical explanation refer to *Automated Hydrometric Computation Procedures*.

Depth-integrated sediment sample is a suspended sediment sample collected at a single vertical in a cross section in a sampler moving vertically at a constant transit rate and represents an average sample for that part of the depth ranging from the water surface to about nine centimetres above the streambed.

Instantaneous suspended sediment sample is a sample collected at a fixed vertical in a river cross section.

Measured suspended sediment discharge is the suspended sediment discharge that can be computed from stream discharge and the concentration of sediment determined from depth-integrated sediment samples.

Particle-size analysis is the process of determining the size distribution of particles in a sediment sample.

Point-integrated sediment sample is a sample of the water-sediment mixture taken over a specified period of time at a fixed point and depth in a river cross section.

DÉFINITION DES TERMES

Les définitions suivantes sont présentées afin de faciliter la compréhension des termes utilisés dans la présente publication:

Échantillonnage automatique à l'aide d'une pompe (Automatic pump sample): Prélèvement d'un mélange de sédiments et d'eau au moyen d'une pompe fonctionnant automatiquement, en un point précis d'un cours d'eau.

Charriage (Bed load): Matières roulées ou poussées sur le fond sous l'action de l'eau, mais restant en contact presque permanent avec le fond.

Matériau du lit (Bed material): Mélange de sédiments composant le lit d'un cours d'eau.

Débit journalier des sédiments en suspension (Daily load): Débit des sédiments en suspension exprimé en tonnes par jour, pour une journée donnée. On l'obtient en multipliant la concentration journalière moyenne des sédiments (mg/L) par le débit journalier moyen de l'eau (m^3/s) et le facteur de conversion 0.0864.

Concentration journalière moyenne (Daily mean concentration): Moyenne pondérée en fonction du temps, calculée à partir d'une courbe de la concentration établie manuellement. La valeur de la concentration moyenne peut être déterminée arithmétiquement ou graphiquement. Pour la déterminer arithmétiquement, on peut, soit choisir sur la courbe des valeurs représentant des intervalles uniformes de temps et faire la moyenne arithmétique, soit choisir sur cette courbe des valeurs qui représentent des intervalles inégaux de temps et pondérer ces valeurs en fonction des intervalles de temps correspondants. En ce qui concerne les méthodes graphiques, consulter *Méthodes de bureau pour les calculs de données sur les sédiments* et, pour la méthode automatisée, *Automated Hydrometric Computation Procedures*.

Échantillon intégré sur toute la profondeur (Depth integrated sediment sample): Échantillon des sédiments en suspension prélevé sur une verticale précise d'une section transversale d'un cours d'eau à l'aide d'un échantillonneur se déplaçant verticalement à une vitesse constante; il représente un échantillon moyen des matières en suspension entre la surface de l'eau et environ 9 cm du fond.

Échantillon instantané de sédiments en suspension (Instantaneous suspended sediment sample): Échantillon prélevé à une verticale précise d'une section transversale d'un cours d'eau.

Débit mesuré des sédiments en suspension (Measured suspended sediment discharge): Débit des sédiments en suspension qui peut être calculé à partir du débit du cours d'eau et de la concentration des sédiments déterminée à partir d'échantillons intégrés sur toute la profondeur.

Analyse granulométrique (Particle-size analysis): Détermination de la répartition de la taille des particules dans un échantillon de sédiments.

Échantillon ponctuel et intégré (Point-integrated sediment sample): Échantillon constitué d'un mélange d'eau et de sédiments, prélevé au cours d'une période de temps donnée en un point précis d'une section transversale d'un cours d'eau et à une profondeur donnée.

Sediment is fragmental material which has deposited, eroded or transported by a flowing stream.

Sediment hydrograph is a graph showing the variation of suspended sediment concentration or sediment discharge with respect to time.

Single sample is a sample taken at a selected permanent vertical in a cross section. Two bottles of water-sediment mixture make up each single sample.

Single sampling vertical is a selected permanent vertical in a cross section in which single suspended sediment samples are collected.

Suspended sediment is sediment that moves in suspension in water either as a colloid or through the influence of the upward component of turbulent currents.

Suspended sediment concentration is the ratio of the weight of dry solids in a water-sediment mixture to the volume of the mixture. The units of this ratio are "milligrams per litre" (mg/L).

Suspended sediment load is the quantity of suspended sediment transported through a cross section per unit of time.

Total sediment load is the sum of the suspended sediment load and the bed load.

Unmeasured sediment load is the difference between total sediment load and measured suspended sediment load.

Sédiments (Sediment): Matières fragmentaires qui ont été déposées, érodées ou transportées par un cours d'eau.

Hydrogramme des sédiments (Sediment hydrograph): Graphique représentant la variation de la concentration des sédiments en suspension ou du débit des sédiments en fonction du temps.

Échantillon unique (Single sample): Échantillon prélevé sur une verticale permanente particulière dans une section transversale. Deux bouteilles du mélange eau-sédiments constituent un seul échantillon.

Verticale d'échantillonnage unique (Single sampling vertical): Verticale permanente d'une section transversale où des échantillons uniques de sédiments en suspension sont prélevés.

Sédiments en suspension (Suspended sediment): Matériaux qui se déplacent au sein de l'eau, soit sous forme colloïdale, soit sous l'influence des forces ascendantes des courants turbulents.

Concentration des sédiments en suspension (Suspended sediment concentration): Rapport entre le poids des matières solides sèches contenues dans un mélange eau-sédiments et le volume du mélange. Les unités employées sont les «milligrammes par litre» (mg/L).

Débit des sédiments en suspension (Suspended sediment load): Quantité de sédiments en suspension transportés par unité de temps à travers une section transversale d'un cours d'eau.

Débit total des sédiments (Total sediment load): Somme du débit des sédiments en suspension et du débit charrié.

Débit non mesuré des sédiments (Unmeasured sediment load): Différence entre le débit total des sédiments et le débit mesuré des sédiments en suspension.

REVISIONS

A number of corrections or revisions have been made to previously published data. Many of these were required because of typographical or computational errors which were exposed when the data were stored on magnetic tape and monthly means were re-calculated by computer. Other errors were discovered or different interpretations of basic data were made during the systematic review of historical streamflow data presently underway.

Revisions to daily discharges or sediment data are not published at present. However, those stations where a systematic review has been conducted are identified in the Surface Water Data Reference Index publication. The Historical Streamflow Summary publications contain revisions to monthly and annual mean discharges, and annual extremes of discharge. Revisions, corrections or additions made to discharges and sediment after January 1, 1980, are indicated by an "R" symbol in the data summaries. Detailed information on revisions to historical data is available from the appropriate Regional Chief.

RÉVISIONS

On a corrigé ou révisé des données déjà publiées. Il a été nécessaire d'effectuer plusieurs corrections, car on a relevé des erreurs typographiques ou de calcul lorsqu'on a enregistré les données sur rubans magnétiques et qu'on a recalculé les moyennes mensuelles à l'aide d'un ordinateur. On a aussi relevé d'autres erreurs ou fait des interprétations différentes de certaines données de base au cours de la révision systématique des données historiques sur le débit, actuellement en cours.

Les corrections apportées aux débits journaliers ou aux données sur les sédiments ne sont pas publiées, du moins pour le moment. Cependant, les stations où on a effectué une révision systématique sont indiquées dans l'*Index de référence des données sur les eaux de surface*. Les publications intitulées *Sommaire chronologique de l'écoulement* contiennent des données révisées sur les débits mensuels et annuels moyens et les extrêmes annuels du débit. Les révisions, corrections ou ajouts apportés aux données sur les débits et sur les sédiments après le 1er janvier 1980 sont indiqués par la lettre R dans les résumés des données. On peut obtenir plus de détails sur les révisions en s'adressant au chef régional concerné.

EQUIVALENTS OF MEASURE

The following list of convenient equivalents of measure includes the relationship between imperial units and the International System of Units (SI).

1 inch equals 2.54 cm (centimetres)
1 foot equals 0.3048 m (metre)
1 statute mile equals 1.6093 km (kilometres)

1 cm (centimetre) equals 0.393 70 inch
1 m (metre) equals 3.2808 feet
1 km (kilometre) equals 0.621 37 mile

1 acre equals 43 560 square feet
1 acre equals 0.404 69 ha (hectare)
1 square mile equals 640 acres
1 square mile equals 2.5900 km^2 (square kilometres)
1 square mile equals 259.0 ha (hectares)

1 ha (hectare) equals 10 000 m^2 (square metres)
1 ha (hectare) equals 2.4710 acres
1 km^2 (square kilometre) equals 0.386 10 square mile

1 cubic foot equals 6.2288 imperial gallons
1 imperial gallon equals 4.546 09 L (litres)
1 imperial gallon equals 1.2010 U.S. gallons
1 U.S. gallon equals 0.133 68 cubic foot
1 cubic foot equals 0.028 317 m^3 (cubic metre)
1 m^3 (cubic metre) equals 35.315 cubic feet
1 dam^3 (cubic decametre) equals 1000 m^3 (cubic metres)
1 dam^3 (cubic decametre) equals 1 mm (millimetre) over 1 km^2 (square kilometre)

1 cubic foot per second for one day equals 1.9835 acre-feet
1 cubic foot per second for one day covers one square mile to a depth of 0.037 19 inch
1 acre-foot equals 1.2335 dam^3 (cubic decametres)
1 m^3/s (cubic metre per second) for one day equals 86.4 dam^3 (cubic decametre)
1 m^3/s (cubic metre per second) for one day covers one square kilometre to a depth of 0.0864 m (metre)

1 foot per second equals 0.6818 mile per hour
1 mile per hour equals 1.467 feet per second
1 m/s (metre per second) equals 3.6 km/h (kilometre per hour)
1 km/h (kilometre per hour) equals 0.2778 m/s (metre per second)

1 cubic foot per second equals 0.028 317 m^3/s (cubic metre per second)
1 m^3/s (cubic metre per second) equals 35.315 cubic feet per second

1 pound equals 0.453 59 kg (kilogram)
1 kg (kilogram) equals 2.2046 pounds

1 short ton (2000 pounds) equals 0.907 18 t (tonne)
1 t (tonne) equals 2204.6 pounds

degrees Celsius = 5/9 (degrees Fahrenheit – 32)
degrees Fahrenheit = 9/5 (degrees Celsius) + 32

ÉQUIVALENCES DES UNITÉS DE MESURE

Voici une liste des unités de mesure impériales et leurs équivalences dans le Système international d'unités (SI).

1 pouce vaut 2.54 cm (centimètres)
1 pied vaut 0.3048 m (mètre)
1 mille terrestre vaut 1.6093 km (kilomètre)

1 cm (centimètre) vaut 0.393 70 pouce
1 m (mètre) vaut 3.2808 pieds
1 km (kilomètre) vaut 0.621 37 mille

1 acre vaut 43 560 pieds carrés
1 acre vaut 0.404 69 ha (hectare)
1 mille carré vaut 640 acres
1 mille carré vaut 2.5900 km^2 (kilomètres carrés)
1 mille carré vaut 259.0 ha (hectares)

1 ha (hectare) vaut 10 000 m^2 (mètres carrés)
1 ha (hectare) vaut 2.4710 acres
1 km^2 (kilomètre carré) vaut 0.386 10 mille carré

1 pied cube vaut 6.2288 gallons impérials
1 gallon impérial vaut 4.546 09 L (litres)
1 gallon impérial vaut 1.2010 gallon américain
1 gallon américain vaut 0.133 68 pied cube
1 pied cube vaut 0.028 317 m^3 (mètre cube)
1 m^3 (mètre cube) vaut 35.315 pieds cubes
1 dam^3 (décamètre cube) vaut 1000 m^3 (mètres cubes)
1 dam^3 (décamètre cube) vaut 1 mm (millimètre) qui couvre 1 km^2 (kilomètre carré)

1 pied cube par seconde pendant un jour vaut 1.9835 acre-pied
1 pied cube par seconde pendant un jour couvre un volume d'un mille carré par 0.037 19 pouce
1 acre-pied vaut 1.2335 dam^3 (décamètre cube)
1 m^3/s (mètre cube par seconde) pour un jour vaut 86.4 dam^3 (décamètres cubes)
1 m^3/s (mètre cube par seconde) pour un jour couvre un kilomètre carré à une profondeur de 0.0864 m (mètre)

1 pied par seconde vaut 0.6818 mille par heure
1 mille par heure vaut 1.467 pied par seconde
1 m/s (mètre par seconde) vaut 3.6 km/h (kilomètres par heure)
1 km/h (kilomètre par heure) vaut 0.2778 m/s (mètre par seconde)

1 pied cube par seconde vaut 0.028 317 m^3/s (mètre cube par seconde)
1 m^3/s (mètre cube par seconde) vaut 35.315 pieds cubes par seconde

1 livre vaut 0.453 59 kg (kilogramme)
1 kg (kilogramme) vaut 2.2046 livres

1 tonne courte (2000 livres) vaut 0.907 18 t (tonne)
1 t (tonne) vaut 2204.6 livres

degrés Celsius = 5/9 (degrés Fahrenheit – 32)
degrés Fahrenheit = 9/5 (degrés Celsius) + 32

MANITOBA

ANTLER RIVER NEAR MELITA - STATION NO. 05NF002

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 49 03 34 N LONG 101 02 56 W
DRAINAGE AREA: 3 230 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 294 TONNES FOR THE PERIOD JAN 01 TO DEC 31

REMARKS:

DAY	JAN DAILY DISCHARGE (m³/s)	JAN MEAN CONCENTRATION (mg/L)	JAN DAILY LOAD (t)	FEB DAILY DISCHARGE (m³/s)	FEB MEAN CONCENTRATION (mg/L)	FEB DAILY LOAD (t)	MAR DAILY DISCHARGE (m³/s)	MAR MEAN CONCENTRATION (mg/L)	MAR DAILY LOAD (t)	DAY
1	0 B	0	0	0 B	0	0	0 B	0	0	1
2	0 B	0	0	0 B	0	0	0 B	0	0	2
3	0 B	0	0	0 B	0	0	0 B	0	0	3
4	0 B	0	0	0 B	0	0	0 B	0	0	4
5	0 B	0	0	0 B	0	0	0 B	0	0	5
6	0 B	0	0	0 B	0	0	0 B	0	0	6
7	0 B	0	0	0 B	0	0	0 B	0	0	7
8	0 B	0	0	0 B	0	0	0 B	0	0	8
9	0 B	0	0	0 B	0	0	0 B	0	0	9
10	0 B	0	0	0 B	0	0	0 B	0	0	10
11	0 B	0	0	0 B	0	0	0 B	0	0	11
12	0 B	0	0	0 B	0	0	0.192 B	14	0.23	12
13	0 B	0	0	0 B	0	0	0.455 B	14	0.55	13
14	0 B	0	0	0 B	0	0	0.272 B	14	0.33	14
15	0 B	0	0	0 B	0	0	0.956 B	14	1.16	15
16	0 B	0	0	0 B	0	0	3.26 B	15 S	4.25	16
17	0 B	0	0	0 B	0	0	6.87 B	15 S	11.3	17
18	0 B	0	0	0 B	0	0	7.08 B	13 S	7.95	18
19	0 B	0	0	0 B	0	0	6.40 B	12 S	6.64	19
20	0 B	0	0	0 B	0	0	6.73 B	12 S	6.98	20
21	0 B	0	0	0 B	0	0	6.42 B	16 S	8.88	21
22	0 B	0	0	0 B	0	0	7.88 B	36 S	24.5	22
23	0 B	0	0	0 B	0	0	10.6 B	36 S	33.0	23
24	0 B	0	0	0 B	0	0	6.85 B	26 S	15.4	24
25	0 B	0	0	0 B	0	0	5.07	16 S	7.01	25
26	0 B	0	0	0 B	0	0	5.56	15 S	7.21	26
27	0 B	0	0	0 B	0	0	4.61	14 S	5.58	27
28	0 B	0	0	0 B	0	0	3.61 B	15 S	4.68	28
29	0 B	0	0				2.78 B	13 S	3.13	29
30	0 B	0	0				2.26 B	11 S	2.15	30
31	0 B	0	0				2.72 B	11 S	2.59	31
TOTAL	0		0	0		0	90.805		153.52	TOTAL

DAY	APR DAILY DISCHARGE (m³/s)	APR MEAN CONCENTRATION (mg/L)	APR DAILY LOAD (t)	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	DAY
1	3.49	14 S	4.22	0.575	3 S	0.15	0.085	5	0.04	1
2	3.97	12 S	4.12	0.537	3	0.14	0.091	5	0.04	2
3	3.83	11 S	3.74	0.495	3 S	0.13	0.115	5	0.05	3
4	3.30	11 S	3.14	0.454	3	0.12	0.086	4	0.03	4
5	2.83	11	2.78	0.405	3	0.10	0.088	5	0.04	5
6	2.59	11	2.46	0.372	4	0.13	0.122	5 S	0.05	6
7	2.28	13 S	2.56	0.338	4 S	0.12	0.087	4	0.03	7
8	2.10	14 S	2.54	0.310	4	0.11	0.055	4	0.02	8
9	2.30	15 S	2.98	0.291	4	0.10	0.053	4	0.02	9
10	2.81	19 S	4.28	0.283	4 S	0.10	0.030	3	0.01	10
11	2.89	22	5.49	0.286	8	0.20	0.049	3	0.01	11
12	2.58	17 S	3.79	0.285	13 S	0.32	0.041	3	0.01	12
13	1.97	12	2.04	0.272	14	0.33	0.032	2	0.01	13
14	1.87	11	1.88	0.263	14	0.32	0.035	2	0.01	14
15	1.48	11 S	1.38	0.280	13 S	0.28	0.020	2	0	15
16	1.26	12 S	1.31	0.249	8	0.17	0.005	2 S	0	16
17	1.15	12	1.19	0.238	4 S	0.08	0	0	0	17
18	1.08	9 S	0.84	0.229	5	0.10	0	0	0	18
19	1.01	10 S	0.87	0.281	9 S	0.22	0	0	0	19
20	1.01	9	0.79	0.280	9	0.22	0	0 S	0	20
21	0.846	6 S	0.49	0.280	5 S	0.13	0	0	0	21
22	0.888	5	0.38	0.247	4	0.09	0	0	0	22
23	0.838	5 S	0.36	0.232	4	0.08	0	0	0	23
24	0.788	5	0.34	0.214	4	0.07	0	0	0	24
25	0.769	3 S	0.20	0.174	3	0.05	0	0	0	25
26	0.756	3	0.20	0.151	4	0.05	0	0	0	26
27	0.713	3 S	0.18	0.123	5	0.05	0	0	0	27
28	0.680	3	0.18	0.101	5	0.04	0	0	0	28
29	0.648	3 S	0.17	0.087	5 S	0.04	0	0	0	29
30	0.612	3	0.16	0.083	5	0.03	0	0	0	30
31				0.074	5	0.03				31
TOTAL	53.217		54.78	8.439		4.11	0.992		0.37	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

MANITOBA

ANTLER RIVER NEAR MELITA - STATION NO. 05NF002

SUSPENDED SEDIMENT FOR 1985

DAY	JUL DAILY DISCHARGE (m^3/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m^3/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	DAY
1	0	0	0	0	0	0	3.48	5	1.49	1
2	0	0	0	0	0	0	3.00	4	1.04	2
3	0	0	0	0	0	0	2.80	5	1.12	3
4	0	0	0	0	0	0	2.34	5 S	1.01	4
5	0	0	0	0	0	0	2.12	5	0.92	5
6	0	0	0	0	0	0	1.95	5	0.84	6
7	0	0	0	0	0	0	1.83	4	0.83	7
8	0	0	0	0	0	0	1.81	4	0.82	8
9	0	0	0	0	0	0	1.77	3	0.46	9
10	0	0	0	0	0	0	1.73	3	0.45	10
11	0	0	0	0	0	0	1.87	3	0.43	11
12	0	0	0	0	0	0	1.81	3	0.42	12
13	0	0	0	0	0	0	1.80	3 S	0.41	13
14	0	0	0	3.40	10 S	2.94	1.70	3	0.44	14
15	0	0	0	3.72	9 S	2.89	1.88	3	0.51	15
16	0	0	0	3.12	8	2.16	1.88	3	0.51	16
17	0	0	0	2.89	8	2.00	1.93	3	0.50	17
18	0	0	0	2.87	8 S	1.98	1.84	3	0.48	18
19	0	0	0	2.67	8	1.85	1.83	3	0.47	19
20	0	0	0	2.57	8	1.78	1.80	3	0.47	20
21	0	0	0	2.85	9	2.22	1.78	3	0.48	21
22	0	0	0	3.98	9 S	3.09	1.70	2	0.29	22
23	0	0	0	3.84	5	1.70	1.68	3	0.44	23
24	0	0	0	4.09	5 S	1.77	1.78	3	0.46	24
25	0	0	0	4.84	5	2.13	1.88	3	0.49	25
26	0	0	0	5.17	5 S	2.23	1.94	3 S	0.50	26
27	0	0	0	4.88	5	2.15	1.98	3 S	0.51	27
28	0	0	0	4.53	5	1.96	1.95	3	0.51	28
29	0	0	0	4.74	5	2.05	1.90	3	0.49	29
30	0	0	0	5.32	5	2.30	1.84	3	0.48	30
31	0	0	0	4.87	8 S	3.37				31
				4.03	8	2.09				
TOTAL	0		0	74.88		42.88	58.96		17.86	TOTAL

DAY	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DEC DAILY DISCHARGE (m^3/s)	DEC MEAN CONCENTRATION (mg/L)	DEC DAILY LOAD (t)	DAY
1	1.87	3	0.48	0.977	4	0.34	0.294 B	4	0.10	1
2	1.88	3 S	0.48	0.983	4	0.33	0.273 B	4	0.09	2
3	1.76	3	0.46	0.852	4	0.33	0.280 B	4	0.09	3
4	1.67	3	0.43	1.01	4	0.35	0.282 B	4	0.09	4
5	1.59	3	0.41	1.06	4 S	0.37	0.239 B	4	0.08	5
6	1.53	3	0.40	1.03	4	0.36	0.230 B	4	0.08	6
7	1.50	3	0.39	0.941 B	4 S	0.33	0.223 B	4	0.08	7
8	1.49	3	0.38	0.907 B	4	0.31	0.217 B	4	0.07	8
9	1.44	3 S	0.37	0.811 B	4	0.28	0.209 B	4 S	0.07	9
10	1.39	3	0.36	0.787 B	4	0.27	0.204 B	4	0.07	10
11	1.34	3	0.35	0.789 B	4	0.27	0.200 B	4	0.07	11
12	1.31	3	0.34	0.795 B	4	0.27	0.199 B	4	0.07	12
13	1.29	3	0.33	0.747 B	4	0.26	0.190 B	4	0.07	13
14	1.28	3	0.33	0.704 B	4 S	0.24	0.188 B	4	0.06	14
15	1.25	3 S	0.32	0.689 B	4	0.23	0.185 B	4	0.06	15
16	1.31	3	0.34	0.640 B	4	0.22	0.183 B	4	0.06	16
17	1.38	3	0.36	0.621 B	4	0.21	0.180 B	4	0.06	17
18	1.52	3	0.39	0.635 B	4	0.22	0.178 B	4	0.06	18
19	1.70	3	0.44	0.746 B	4	0.26	0.177 B	4	0.06	19
20	1.74	3	0.45	0.778 B	4	0.27	0.170 B	4	0.06	20
21	1.73	3	0.45	0.856 B	4	0.23	0.172 B	4	0.06	21
22	1.71	3	0.44	0.575 B	4	0.20	0.177 B	4	0.06	22
23	1.59	3	0.41	0.501 B	4	0.17	0.178 B	4	0.06	23
24	1.40	3	0.38	0.484 B	4	0.16	0.183 B	4	0.06	24
25	1.27	3	0.33	0.441 B	4	0.15	0.183 B	4	0.05	25
26	1.19	3	0.31	0.416 B	4	0.14	0.189 B	4	0.05	26
27	1.15	3	0.30	0.388 B	4	0.13	0.148 B	4	0.05	27
28	1.12	4 S	0.38	0.358 B	4	0.12	0.139 B	4	0.05	28
29	1.08	4	0.37	0.336 B	4	0.12	0.128 B	4	0.04	29
30	1.05	4	0.36	0.315 B	4	0.11	0.125 B	4	0.04	30
31	1.01	4	0.35				0.119 B	4	0.04	31
TOTAL	44.50		11.88	31.011		7.25	5.913		2.01	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

ANTLER RIVER NEAR MELITA - STATION NO. 05NP002

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE VERTICAL SAMPLING (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR	15 09:05	0.5	3.28	W	MID		DH59	14		198														
MAR	16 19:06	0.5	3.28	W	MID		DH59	15		237														
MAR	17 11:00	0.5	6.87	W	MID		DH59	14																
MAR	17 18:30	0.5	6.87	W	MID		DH59	26																
MAR	18 08:58	0.5	7.08	W	MID		DH59	12																
MAR	19 09:55	0.5	6.40	W	MID		DH59	11																
MAR	19 09:58	0.5	6.40	W	MID		DH59	12																
MAR	20 08:28	0.5	6.73	W	MID		DH59	12																
MAR	21 08:30	0.5	6.42	W	MID		DH59	12																
MAR	22 15:45	0.5	7.88	W	MID		DH59	39																
MAR	22 18:05	0.5	7.88	W	MID		DH59	32																
MAR	23 16:05	0.5	10.6	W	MID		DH59	33		198														
MAR	24 14:34	3.0	6.85	W	MID		DH59	25																
MAR	25 08:29	1.0	4.84		MID		DH59	16																
MAR	26 12:05	1.0	1.02		21.0	M	DH59	17		196														
MAR	26 12:09	1.0	1.26		18.0	M	DH59	16		197														
MAR	26 12:15	1.0	1.22		16.0	M	DH59	17		196														
MAR	26 12:20	1.0	1.24		14.0	M	DH59	16		193														
MAR	26 12:30	1.0	1.11		12.0	M	DH59	16		189														
MAR	26 12:45	1.0	5.84		MID		DH59	15		188														
MAR	27 08:22	0.5	4.04		MID		DH59	15																
MAR	28 15:38	0.5	3.61	W	MID		DH59	16																
MAR	28 11:00	0.5	2.79	W	MID		DH59	13																
MAR	29 11:45	0.5	2.79	W	MID		DH59	12																
MAR	30 19:08	0.5	2.26	W	MID		DH59	10		210														
MAR	31 12:10	0.5	2.72	W	MID		DH59	11																
APR	01 08:25	1.0	3.35		MID		DH59	14																
APR	02 18:21	4.0	3.83		MID		DH59	11																
APR	03 09:45	3.0	4.09		MID		DH59	11																
APR	03 19:12	3.0	3.81		MID		DH59	11																
APR	04 08:35	3.0	3.35		MID		DH59	11																
APR	07 08:35	1.5	2.32		MID		DH59	13		304														
APR	08 09:58	1.5	2.05		MID		DH59	14																
APR	09 18:40	7.0	2.40		MID		DH59	16																
APR	10 08:47	5.0	2.59		MID		DH59	16																
APR	12 17:40	7.0	2.39		MID		DH59	16		276														
APR	15 11:19	9.0	1.47		MID		DH59	11																
APR	16 15:00	7.0	1.23		MID		DH59	13																
APR	18 18:30	12.0	1.07		MID		DH59	8																
APR	19 13:51	12.0	1.00		MID		DH59	10		287														
APR	21 09:45	13.0	0.950		MID		DH59	5																
APR	23 17:20	13.0	0.825		MID		DH59	5																
APR	25 12:30	12.0	0.788		MID		DH59	2		326														
APR	27 08:39	8.0	0.718		MID		DH59	3																
APR	28 07:28	13.5	0.657		MID		DH59	3																
MAY	01 07:30	14.0	0.582		MID		DH59	3		355														
MAY	03 12:37	16.0	0.494		MID		DH59	3																
MAY	07 14:15	14.0	0.334		MID		DH59	4																
MAY	07 15:45	14.0	0.335		MID		DH59	4		384														
MAY	10 14:00	15.0	0.280		MID		DH59	5																
MAY	12 07:10	9.0	0.288		MID		DH59	13																
MAY	15 06:45	8.0	0.262		MID		DH59	14																
MAY	17 07:30	9.0	0.242		MID		DH59	4		403														
MAY	19 11:45	12.0	0.287		MID		DH59	10																
MAY	21 20:43	19.0	0.252		MID		DH59	4		418														
MAY	29 12:45	16.0	0.092		MID		DH59	5		414														
JUN	06 13:42	19.0	0.138		MID		DH48	22	A	398														
JUN	16 11:30	20.0	0.005		MID		DH48	22	A	427														
JUN	20 17:17	21.0	0.		MID		DH48	26	A	408														
AUG	13 13:10	14.0	3.78		MID		DH59	10																
AUG	14 12:22	16.0	3.73		MID		DH59	8		419														
AUG	14 18:40	16.0	3.58		MID		DH59	8																
AUG	17 16:03	15.0	2.82		MID		DH59	8																
AUG	21 07:20	15.0	3.91		MID		DH59	9		319														
AUG	23 17:48	16.0	4.27		MID		DH59	5																
AUG	25 12:42	17.0	5.18		MID		DH59	5																
AUG	30 16:04	18.0	4.73		MID		DH59	8		359														
SEP	04 14:04	18.0	2.33		MID		DH59	5																
SEP	13 15:55	14.0	1.59		MID		DH59	3		430														
SEP	26 08:25	6.5	1.94		MID		DH59	74	A	334														
SEP	27 12:50	7.0	1.96		MID		DH59	53	A	270														
OCT	03 11:30	5.5	1.88		MID		DH59	95	A	309														
OCT	09 13:21	5.0	1.44		MID		DH59	62	A	172														
OCT	12 08:45	4.0	1.32		MID		DH59	79	A	221														
OCT	18 11:45	4.0	1.25		MID		DH59	99	A	381														
OCT	28 09:24	4.5	1.12		MID		DH59	81	A	404														
NOV	05 11:40	5.0	1.06		MID		DH59	88	A	349														
NOV	07 12:45	2.0	0.941	W	MID		DH59	187	A	355														
NOV	14 16:29	1.0	0.704	W	MID		DH59	134	A	515														
DEC	09 18:05	0.5	0.209	W	MID		DH48	4		731														

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1985

DISCHARGE SYMBOL(S): W - DAILY MEAN; ICE CONDITIONS
CONCENTRATION SYMBOL(S): A - CLASSIFIED AS AN ANOMALY
VERTICAL SYMBOL(S): M - A SEDIMENT MEASUREMENT VERTICAL

MANITOBA

ANTLER RIVER NEAR MELITA - STATION NO. 05NF002

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY : MAR-OCT MEAN LOAD (TONNES)	SUMMARY : MAR-OCT HISTORICAL MEAN LOAD (TONNES)	SUMMARY : MAR-OCT STANDARD ERROR OF MEAN %
1976	--CCCCCCCC--	MANUAL	70	APR 09	4	SEP 15	687	APR 12 *	8 880 *	36.3	36.3	---
1977	--CCCCCCCCCC	MANUAL	34	APR 13	6	JUN 21	0.59	MAY 22	16.3	0.07	18.2	99.5
1978	CCCCCCCCCCCC	MANUAL	20	APR 01	6	APR 18	4.81	APR 04	39.1	0.16	12.2	86.9
1979	CCCCCCCCCCCC	MANUAL	117	APR 23	0	JUL 15 *	312	APR 24	1 430	5.82	10.6	81.8
1980	CCCCCCCCCCCC	MANUAL	81	APR 18	8	APR 20	2.77	APR 18	7.85	0.03	5.48	83.1
1981	CCCCCCCCCCCC	MANUAL	17	APR 08	7	APR 28	7.93	FEB 27	25.5	0.04	7.07	83.7
1982	CCCCCCCCCCCC	MANUAL	84	APR 17	1	MAY 23	170	APR 17	605	2.47	5.41	78.7
1983	CCCCCCCCCCCC	MANUAL	27	APR 26	5	MAY 11	29.2	APR 26	285	1.16	5.76	76.7
1984	CCCCCCCCCCCC	MANUAL	21	MAR 25	2	APR 21	0.26	APR 02	5.27	0.02	5.12	77.1
1985	CCCCCCCCCCCC	MANUAL	167	NOV 07 *	2	APR 25	33.0	MAR 23	294	1.18	4.72	75.3

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH

* - EXTREME FOR PERIOD OF RECORD

MANITOBA

ASSINIBOINE RIVER AT HEADINGLEY - STATION NO. 05MJ001

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 49 52 09 N LONG 97 24 10 W
DRAINAGE AREA: 153 000 km²
TYPE OF FLOW: REGULATED
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 339 000 TONNES FOR THE PERIOD JAN 01 TO DEC 31

REMARKS:

	JAN			FEB			MAR			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	17.1 B	55	81.3	15.8 B	54	73.7	20.6 B	48	85.4	1
2	17.8 B	57	87.7	15.7 B	54	73.2	20.3 B	48	84.2	2
3	18.6 B	57	91.6	16.0 B	53	73.3	20.1 B	49	83.4	3
4	19.2 B	58	96.2	15.7 B	53	71.8	20.4 B	48	84.6	4
5	19.1 B	59	97.4	13.8 B	53	63.2	20.6 B	48	85.4	5
6	18.4 B	60	95.4	15.5 B	52	69.6	21.3 B	49	90.2	6
7	18.2 B	61	95.9	16.7 B	52 S	75.0	22.1 B	53	101	7
8	18.3 B	62	98.0	17.3 B	52	77.7	21.8 B	55	102	8
9	18.8 B	62 S	101	18.0 B	52	80.9	19.8 B	59	101	9
10	19.0 B	62	102	18.6 B	52	83.6	20.6 B	63	112	10
11	18.7 B	61	98.6	18.8 B	51	82.8	21.8 B	63 S	119	11
12	17.8 B	61	93.8	18.8 B	51	82.8	22.6 B	62	121	12
13	17.9 B	61	94.3	18.6 B	51	82.0	22.9 B	63	125	13
14	18.0 B	60	93.5	18.5 B	51	81.5	23.3 B	63	127	14
15	18.7 B	60	96.9	18.9 B	51	83.3	23.8 B	64	130	15
16	18.3 B	59	93.3	19.5 B	50	84.2	23.6 B	64	130	16
17	18.1 B	59	92.3	19.9 B	50	86.0	23.9 B	63	130	17
18	18.1 B	59	92.3	20.1 B	50	86.8	24.7 B	65	139	18
19	18.0 B	58	90.2	20.0 B	50	86.4	25.4 B	71	155	19
20	17.6 B	58	88.2	19.8 B	50	85.5	25.8 B	76	169	20
21	17.0 B	58	85.2	19.9 B	50	86.0	27.4 B	81	192	21
22	17.0 B	57	83.7	19.8 B	49	84.2	30.2 B	82	214	22
23	17.2 B	57	84.7	19.7 B	49	83.4	33.2 B	84	241	23
24	16.1 B	57	79.3	19.6 B	49	83.8	40.7 B	87	306	24
25	15.3 B	56	74.0	20.2 B	49	85.5	57.7 B	93	464	25
26	15.7 B	56	76.0	20.5 B	49	86.6	77.1 B	115	765	26
27	16.9 B	56	81.8	20.5 B	49	86.8	89.0 B	168	1 440	27
28	17.1 B	56	82.7	20.6 B	49	87.2	120 B	242	2 510	28
29	16.8 B	55	79.8				122 B	236 S	2 490	29
30	16.3 B	55	77.5				125 B	212	2 290	30
31	15.9 B	54	74.2				130 B	196	2 200	31
TOTAL	548.0		2 783.8	517.1		2 267.1	1 367.1		15 388.2	TOTAL

	APR			MAY			JUN			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	125 B	188	2 030	98.5	280 S	2 470	71.3	85 S	524	1
2	123 B	202 S	2 150	91.8	259 S	2 050	72.8	111 S	698	2
3	126 B	323	3 520	86.1	330 S	2 450	72.2	118 S	736	3
4	127 B	359 S	3 940	83.9	218 S	1 770	72.4	122 S	763	4
5	136 B	338	3 970	97.7	178 S	1 500	71.4	133 S	820	5
6	137 B	324	3 840	98.8	188 S	1 580	68.5	138 S	817	6
7	142 B	312	3 830	97.8	190 S	1 600	67.0	139 S	805	7
8	143 B	305	3 770	95.8	230 S	1 900	66.2	150 S	858	8
9	138 B	306	3 670	92.3	187 S	1 480	64.8	166 S	931	9
10	156 B	412 S	5 550	86.0	274 S	2 040	65.3	177 S	999	10
11	196 B	1 080	18 000	83.2	284 S	1 900	64.9	179 S	1 000	11
12	188 B	1 010 S	16 400	88.6	178 S	1 360	64.7	177	889	12
13	142 B	710 S	8 710	89.8	145 S	1 130	64.2	177 S	882	13
14	157	754 S	10 200	90.3	207 S	1 610	63.5	178 S	866	14
15	171	843 S	12 500	88.9	158 S	1 210	63.7	179	985	15
16	174	853 S	12 800	87.6	134 S	1 010	65.5	183 S	1 040	16
17	165	901 S	13 800	86.8	151 S	1 130	65.8	186	1 050	17
18	150	763 S	9 890	84.8	140 S	1 020	66.0	182 S	1 040	18
19	136	807 S	7 130	83.0	185 S	1 330	65.5	180	1 020	19
20	124	535 S	5 820	81.6	188 S	1 180	65.8	177 S	1 010	20
21	114	405 S	3 990	80.9	181 S	1 130	66.0	175	998	21
22	120	380 S	3 940	79.8	150 S	1 030	65.0	173	972	22
23	123	385 S	4 090	77.6	144 S	965	64.2	171	949	23
24	124	382 S	3 880	77.0	120 S	798	63.0	168	914	24
25	123	315 S	3 350	76.7	129 S	855	62.2	165	887	25
26	120	296 S	3 070	76.3	146 S	982	60.8	163 S	858	26
27	116	324 S	3 250	75.1	139 S	902	58.8	161	818	27
28	112	297 S	2 870	73.5	137 S	870	56.9	154 S	757	28
29	109	284 S	2 670	70.2	120 S	728	50.5	146	637	29
30	104	309 S	2 780	66.1	84 S	480	51.1	157	693	30
31				70.4	70 S	426				31
TOTAL	4 122		184 210	2 626.7		41 166	1 940.0		26 514	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

MANITOBA

ASSINIBOINE RIVER AT HEADINGLEY - STATION NO. 05MJ001

SUSPENDED SEDIMENT FOR 1985

DAY	JUL DAILY DISCHARGE (m^3/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m^3/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	DAY
1	48.7	157	661	10.7	88	82.9	26.6	181	416	1
2	43.8	153	579	7.87	87	38.8	26.3	180	409	2
3	38.6	148 S	510	10.2	96	84.6	26.8	183	424	3
4	32.0	128	367	13.2	139	159	27.2	196	461	4
5	28.8	110	274	14.0	155	187	27.9	207	499	5
6	28.8	107 S	266	15.0	180	221	28.8	210	523	6
7	27.3	103	243	17.9	157	243	28.5	221	563	7
8	25.9	98	219	17.4	155	233	33.4	243	701	8
9	25.2	96 S	209	16.6	154	221	33.4	247	713	9
10	24.8	89	191	15.0	148	205	31.5	238	648	10
11	22.3	83	160	16.0	144	199	30.6	230	608	11
12	20.2	80	140	17.0	137	201	35.9	266	825	12
13	22.2	80	153	17.3	133	198	44.3	341	1 310	13
14	21.6	80	149	16.6	129	185	42.9	337	1 250	14
15	20.9	80	144	16.8	123	178	36.4	307	965	15
16	20.4	80	141	15.7	119	161	32.5	304	854	16
17	19.8	81	139	20.4	160	282	30.3	300	785	17
18	19.3	80	133	27.0	215	502	28.2	298	726	18
19	18.7	80	129	40.1	256	887	26.5	294	673	19
20	18.2	79	124	37.9	230	753	23.3	293	590	20
21	17.4	79	119	29.4	202 S	513	21.9	292	553	21
22	16.6	79	113	28.1	199	483	21.1	290	529	22
23	16.6	78	112	30.3	209	547	21.0	288	523	23
24	16.3	79	111	32.0	217 S	600	20.4	287	506	24
25	15.5	78	104	31.0	208	557	21.0	288 S	523	25
26	15.5	77	103	28.8	200	498	24.1	291	606	26
27	14.9	76	97.8	27.8	195 S	468	27.6	304	725	27
28	14.3	75	92.7	27.6	191	455	29.6	313	800	28
29	14.3	74	91.4	28.0	187	452	31.0	315	844	29
30	14.1	73	88.9	28.3	183	447	31.3	308	833	30
31	13.3	73 S	83.9	27.6	181	432				31
TOTAL	697.3		6 037.7	683.57		10 685.3	871.3		20 386	TOTAL

DAY	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DEC DAILY DISCHARGE (m^3/s)	DEC MEAN CONCENTRATION (mg/L)	DEC DAILY LOAD (t)	DAY
1	29.6	293	749	33.3 E	242	695	29.4 B	39	99.1	1
2	27.9 A	287	692	32.9 E	237	674	28.2 B	40	97.5	2
3	26.9 A	283	658	32.4 E	232	649	28.1 B	40	97.1	3
4	26.5	278	637	31.9 E	221	609	29.0 B	40	100	4
5	26.2	271	613	30.8 A	203	540	29.9 B	41	106	5
6	26.2	266	602	30.8	174	460	30.4 B	41	108	6
7	25.8	265	591	29.3	136	344	30.2 B	42	110	7
8	26.1	261	589	28.7	104	258	30.3 B	42	110	8
9	25.7	256	568	20.7	78	140	30.2 B	42	110	9
10	26.0	252	566	17.6	61	92.8	29.6 B	43	110	10
11	26.4	250	570	15.3	57	75.3	28.1 B	43	104	11
12	26.5	251	575	15.4 B	54	71.9	27.4 B	44	104	12
13	27.0	250	583	14.5 B	50	62.6	27.1 B	44	103	13
14	27.6	250	596	18.0 B	50	77.8	27.1 B	44	103	14
15	28.0	250	605	20.7 B	49	87.6	27.4 B	45	107	15
16	27.8	250	600	20.2 B	46	80.3	28.0 B	45	109	16
17	27.7	248	594	19.6 B	46	76.2	28.2 B	45	110	17
18	27.4	248	587	23.6 B	43	87.7	27.7 B	45	110	18
19	27.6	247	589	24.7 B	41	87.5	27.4 B	45	109	19
20	27.6	248	591	23.6 B	40	81.6	27.0 B	45	107	20
21	27.8	247	593	26.5 B	38	89.3	26.7 B	47	108	21
22	28.1	246	622	26.5 B	37	84.7	27.0 B	47	110	22
23	30.0	263	682	26.2 B	37	83.8	27.3 B	47	111	23
24	29.3	253	640	25.9 B	38	85.0	26.0 B	48	108	24
25	29.0	251	628	26.6 B	38	84.0	25.2 B	48	105	25
26	30.8	259	688	25.2 B	37 S	80.6	25.2 B	48	105	26
27	33.1	267	764	30.6 B	37	97.5	25.4 B	48	106	27
28	34.2	261 S	771	30.7 B	36	101	25.9 B	48	110	28
29	34.6	248	742	33.1 B	38	109	26.1 B	50	108	29
30	33.3	248	714	32.1 B	39	108	24.3 B	50	105	30
31	33.3 E	244	702				24.2 B	51	107	31
TOTAL	883.9		19 703	766.1		6 174.2	853.0		3 298.7	TOTAL

A - MANUAL GAUGE B - ICE CONDITIONS E - ESTIMATED S - SAMPLE(S) COLLECTED THIS DAY

ASSINIBOINE RIVER AT HEADINGLEY - STATION NO. 05MJ001

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
JAN 09	09:30	0.5	18.7	B	75.0		DH48	52		584														
FEB 07	13:45	0.5	16.7	B	75.0		DH48	52		547														
MAR 11	10:40	0.5	4.48	B	85.0	M	DH48	81		801														
MAR 11	10:42	0.5	5.31	B	90.0	M	DH48	85		598														
MAR 11	10:45	0.5	2.92	B	100	M	DH48	71		800														
MAR 11	10:47	0.5	3.38	B	110	M	DH48	85		595														
MAR 11	10:50	0.5	5.65	B	130	M	DH48	81		591														
MAR 29	08:00	0.5	122	W	10RB	X	DH48	239		305														
APR 02	07:45	0.5	123	W	WERB	X	DIP	186																
APR 04	15:30	0.5	127	W	WERB	X	DIP	351		234														
APR 10	09:20	1.0	26.4		125	M	DH59	318		294														
APR 10	09:25	1.0	26.2		110	M	DH59	323		289														
APR 10	09:30	1.0	21.7		90.0	M	DH59	327		290														
APR 10	09:35	1.0	26.6		75.0	M	DH59	320		304														
APR 10	09:40	1.0	46.4		55.0	M	DH59	313		291														
APR 12	09:15	1.0	39.1		125	M	DH59	1090		338	17	22	35	54	74	84	94	99	100		16	62	22
APR 12	09:20	1.0	47.1		100	M	DH59	1140		342	24	27	47	65	89	95	98	100			4	69	27
APR 12	09:25	1.0	42.2		75.0	M	DH59	1130		339	20	28	45	65	90	96	99	100			4	68	28
APR 12	09:30	1.0	36.0		80.0	M	DH59	1120		352	17	24	40	62	89	95	98	100			4	72	24
APR 12	09:35	1.0	39.4		45.0	M	DH59	1100		356	18	24	41	66	90	95	97	99	100		5	71	24
APR 12	17:15	4.0	188	W	75.0		DH59	682																
APR 13	12:45	5.0	142	W	75.0		DH59	690																
APR 14	13:50	6.0	159		75.0		DH59	746																
APR 15	16:05	8.0	172		75.0		DH59	859																
APR 16	15:25	7.0	175		75.0		DH59	842																
APR 17	15:25	8.0	30.8		125	M	DH59	910		336	31	38	61	81	94	97	98	100			3	59	38
APR 17	15:30	8.0	38.3		100	M	DH59	942		312	30	35	59	77	95	98	99	100			2	62	36
APR 17	15:35	8.0	33.6		75.0	M	DH59	948		322	30	36	58	77	95	98	99	100			2	62	36
APR 17	15:40	8.0	27.0		60.0	M	DH59	951		332	30	35	56	77	93	97	99	100			3	62	35
APR 17	15:45	8.0	35.4		45.0	M	DH59	898		333	24	32	53	76	94	97	99	100			3	65	32
APR 18	17:20	8.0	147		75.0		DH59	873																
APR 18	17:45	9.0	146		75.0		DH59	715																
APR 19	16:15	12.0	134		75.0		DH59	579																
APR 20	12:20	12.0	126		75.0		DH59	531																
APR 21	14:35	11.0	114		75.0		DH59	388																
APR 22	15:15	11.0	121		75.0		DH59	387																
APR 23	16:30	10.0	124		75.0		DH59	382																
APR 24	16:10	8.0	124		75.0		DH59	359		374														
APR 25	16:05	8.0	123		75.0		DH59	305																
APR 26	16:05	9.0	119		75.0		DH59	298																
APR 27	15:00	10.0	116		75.0		DH59	331																
APR 28	16:10	16.0	112		75.0		DH59	285																
APR 29	12:35	14.0	25.8		130	M	DH59	278		427														
APR 29	12:40	14.0	24.3		95.0	M	DH59	288		430														
APR 29	12:45	14.0	18.8		75.0	M	DH59	282		432														
APR 29	12:50	14.0	20.4		60.0	M	DH59	287		435														
APR 29	12:55	14.0	20.1		40.0	M	DH59	275		435														
APR 29	16:30	13.0	108		75.0		DH59	286																
APR 30	16:20	13.0	103		75.0		DH59	304																
MAY 01	16:35	14.0	97.4		75.0		DH59	288																
MAY 02	16:45	15.0	90.6		75.0		DH59	253																
MAY 03	16:00	15.0	86.8		75.0		DH59	284																
MAY 04	13:00	16.0	93.8		75.0		DH59	195																
MAY 05	16:59	15.0	97.7		75.0		DH59	186																
MAY 06	17:00	15.0	99.1		75.0		DH59	185		470														
MAY 07	16:25	15.0	97.1		75.0		DH59	188																
MAY 08	16:45	16.0	95.6		75.0		DH59	243																
MAY 09	17:00	16.0	90.6		75.0		DH59	168																
MAY 10	17:00	16.0	86.4		75.0		DH59	309																
MAY 11	16:55	16.0	8.40		75.0		DH59	257																
MAY 12	17:00	16.0	89.6		75.0		DH59	149																
MAY 13	17:00	17.0	89.9		75.0		DH59	137		494														
MAY 14	17:10	17.0	90.4		75.0		DH59	215																
MAY 15	17:05	17.0	88.7		75.0		DH59	140																
MAY 16	16:50	17.0	87.5		75.0		DH59	433	C															
MAY 17	16:45	17.0	86.7		75.0		DH59	155																
MAY 18	16:00	17.0	83.9		75.0		DH59	186																
MAY 19	15:40	17.0	82.9		75.0		DH59	1280	C															
MAY 20	15:50	18.0	81.2		75.0		DH59	161		510														
MAY 21	15:55	18.0	80.9		75.0		DH59	163																
MAY 22	15:55	18.0	79.5		75.0		DH59	140																
MAY 23	16:40	18.0	77.2		75.0		DH59	147																
MAY 24	16:00	18.0	77.2		75.0		DH59	105																
MAY 25	16:10	18.0	76.9		75.0		DH59	159																
MAY 26	17:00	18.0	76.1		75.0		DH59	141																
MAY 27	16:20	18.0	74.9		75.0		DH59	141		521														
MAY 28	16:30	18.0	73.4		75.0		DH59	406	C															
MAY 29	17:00	17.0	68.7		75.0		DH59	113																
MAY 30	17:00	17.0	86.8		75.0		DH59	78																
MAY 31	16:05	16.0	70.9		75.0		DH59	343	C															
JUN 1	16:50	16.0	71.3		75.0		DH59	613	C															
JUN 02	16:10	15.0	72.8		75.0		DH59	117																
JUN 03	16:10	15.0	71.9		75.0		DH59	115																
JUN 04	16:30	16.0	72.5		75.0		DH59	428	C	480														
JUN 05	16:40	15.0	70.9		75.0		DH59	879	C															
JUN 06	16:00	15.0	68.1		75.0		DH59	139																
JUN 07	16:20	16.0	66.8		75.0		DH59	1140	C															
JUN 08	12:00	15.0	66.5		75.0		DH59	1220	C															
JUN 09	09:00	15.0	64.5		75.0		DH59	830	C															
JUN 10	08:00	15.0	65.2		75.0		DH59	1150	C	486														
JUN 11	08:30	15.0	14.7		120	M	DH59	171		494														
JUN 11	08:35	15.0	13.2		85.0	M	DH59	180		487														
JUN 11	08:40	15.0	12.2		75.0	M	DH59	178		483														
JUN 11	08:45	15.0	13.5		60.0	M	DH59	186		489														
JUN 11	08:50	15.0	11.3		40.0	M	DH59	180		487														
JUN 13	16:05	15.0	64.3		75.0		DH59	1500	C															
JUN 14	16:15	15.0	63.3		75.0		DH59	1020	C															
JUN 16	16:00	15.0	66.0		75.0		DH59	807	C															
JUN 18	16:00	15.0	66.1		75.0		DH59	612	C	475														
JUN 20	16:30	15.0	66.0		75.0		DH59	881	C															
JUN 26	15:50	17.0	60.5		75.0		DH59	163																
JUN 28	17:00	17.0	58.4		75.0		DH59	822	C															

NOTE : SINGLE VERTICAL LOCATED AT 75.0 METRES FOR 1985

DISCHARGE SYMBOL(S): B - ICE CONDITIONS W - DAILY MEAN; ICE CONDITIONS
CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT
VERTICAL SYMBOL(S): M - A SEDIMENT MEASUREMENT VERTICAL X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

CONTINUED

MANITOBA

ASSINIBOINE RIVER AT HEADINGLEY - STATION NO. 05MJ001 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE VERTICAL SAMPLING (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
JUL 03	12:00	22.0	36.5	75.0		DH59	150															
JUL 03	13:30	22.0	6.15	120	M	DH59	147	482														
JUL 03	13:35	22.0	7.84	95.0	M	DH59	144	466														
JUL 03	13:40	22.0	7.84	75.0	M	DH59	148	467														
JUL 03	13:45	22.0	7.87	60.0	M	DH59	150	466														
JUL 03	13:50	22.0	7.81	45.0	M	DH59	155	478														
JUL 06	12:00	20.0	36.8	75.0		DH59	842	C														
JUL 09	10:00	20.0	25.3	75.0		DH59	1120	C	576													
JUL 31	08:30	21.0	3.16	115	M	DH59	71		572													
JUL 31	08:35	21.0	2.86	80.0	M	DH59	66		576													
JUL 31	08:40	21.0	3.32	75.0	M	DH59	72		591													
JUL 31	08:45	21.0	3.25	55.0	M	DH59	74		578													
JUL 31	08:50	21.0	1.74	40.0	M	DH59	81		575													
AUG 21	08:30	15.0	5.89	120	M	DH59	143		503													
AUG 21	08:35	15.0	6.75	95.0	M	DH59	176		513													
AUG 21	08:40	15.0	5.21	75.0	M	DH59	212		517													
AUG 21	08:45	15.0	5.72	55.0	M	DH59	242		523													
AUG 21	08:50	15.0	4.87	40.0	M	DH59	223		521													
AUG 21	11:00	14.0	29.0	75.0		DH59	612	A														
AUG 24	18:00	15.0	32.0	75.0		DH59	710															
AUG 27	17:00	15.0	27.7	75.0		DH59	624		530													
SEP 25	08:00	8.0	5.28	80.0	M	DH59	293		532													
SEP 25	08:05	8.0	4.70	75.0	M	DH59	305		526													
SEP 25	08:10	8.0	2.94	55.0	M	DH59	295		530													
SEP 25	08:15	8.0	3.27	100	M	DH59	278		523													
SEP 25	08:20	8.0	3.84	120	M	DH59	256		526													
OCT 28	14:30	7.0	7.82	115	M	DH59	236		529													
OCT 28	14:35	7.0	6.53	85.0	M	DH59	250		557													
OCT 28	14:40	7.0	6.95	75.0	M	DH59	261		556													
OCT 28	14:45	7.0	7.39	60.0	M	DH59	263		557													
OCT 28	14:50	7.0	6.69	40.0	M	DH59	300		515													
OCT 28	15:35	7.0	34.2	75.0		DH59	249		552													
NOV 26	10:50	0.5	4.62	15.0	I	DH48	66		722													
NOV 26	10:55	0.5	5.36	35.0	I	DH48	39		732													
NOV 26	11:00	0.5	5.39	55.0	I	DH48	34		729													
NOV 26	11:05	0.5	5.32	75.0	I	DH48	30		730													
NOV 26	11:10	0.5	3.44	95.0	I	DH48	42		732													

NOTE : SINGLE VERTICAL LOCATED AT 75.0 METRES FOR 1985

CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT A - CLASSIFIED AS AN ANOMALY
VERTICAL SYMBOL(S): M - A SEDIMENT MEASUREMENT VERTICAL
I - A SEDIMENT MEASUREMENT VERTICAL NOT AT THE REGULAR MEASUREMENT CROSS-SECTION

ASSINIBOINE RIVER AT HEADINGLEY - STATION NO. 05MJ001

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)				MINIMUM (mg/L)				SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)				TOTAL FOR PERIOD (TONNES)	SUMMARY : JAN-DEC MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1956	---PCP------	MANUAL	870	APR	25		110	MAY	31		40 200	APR	28		844 000	---	---	---
1957	---PCC------	MANUAL	1 370	MAY	02		170	JUN	24		24 100	MAY	02		830 000	---	---	---
1958	---P---------	MANUAL	2 270	APR	08	*	135	APR	30		48 000	APR	06		286 000	---	---	---
1959	---P---------	MANUAL	1 880	APR	15		205	APR	30		19 300	APR	15		87 200	---	---	---
1961	---P--CCCCCC	MANUAL	780	APR	20		13	AUG	21		3 530	APR	19		17 800	---	---	---
1962	CCCCCCCCCCCC	MANUAL	1 410	APR	24		20	JAN	23		37 300	APR	24		283 000	778	778	---
1963	CCCCCCCCCCCC	MANUAL	1 480	APR	11		42	MAR	26		18 200	APR	11		257 000	705	761	6.8
1964	CCCCCCCCCCCC	MANUAL	1 490	APR	18		16	APR	10		29 400	APR	18		320 000	674	785	5.2
1965	CCCCCCCCCCCC	MANUAL	1 270	APR	16		22	NOV	25		37 200	APR	18		598 000	1 630	986	21.5
1966	CCCCCCCCCCCC	MANUAL	935	APR	13		20	FEB	14		22 900	APR	12		532 000	1 480	1 050	17.4
1967	CCCCCCCCCCCC	MANUAL	1 170	APR	20		14	DEC	01		22 200	APR	20		413 000	1 130	1 100	14.1
1968	CCCCCCCCCCCC	MANUAL	1 000	APR	12		11	NOV	20		12 000	APR	11		181 000	440	1 000	16.1
1969	CCCCCCCCCCCC	MANUAL	2 110	APR	16		4	MAR	21	*	55 900	APR	17	*	887 000	2 430	1 180	19.2
1970	CCCCCCCCCCCC	MANUAL	1 080	APR	30		27	OCT	07		24 600	APR	30		877 000	1 580	1 230	16.6
1971	CCCCCCCCCCCC	MANUAL	835	APR	17		26	MAR	26		8 950	APR	17		408 000	1 120	1 210	15.2
1972	CCCCCCCCCCCC	MANUAL	944	MAY	03		13	AUG	28		13 900	MAY	03		548 000	1 500	1 240	13.5
1973	CCCCCCCCCCCC	MANUAL	439	APR	05		42	FEB	14		2 320	APR	05		81 200	222	1 180	15.1
1974	CCCCCCCCCCCC	MANUAL	1 680	APR	23		56	OCT	21		49 400	APR	23		848 000	2 310	1 240	14.6
1975	CCCCCCCCCCCC	MANUAL	1 390	MAY	03		43	APR	03		21 600	MAY	03		835 000	2 290	1 320	14.1
1976	CCCCCCCCCCCC	MANUAL	1 220	APR	15		48	JAN	19		35 200	APR	15		1 090 000	* 2 980	1 430	14.3
1977	CCCCCCCCCCCC	MANUAL	204	APR	13		13	MAR	16		1 030	APR	13		68 700	126	1 350	16.4
1978	CCCCCCCCCCCC	MANUAL	1 160	APR	21		93	OCT	04		14 200	APR	21		232 000	637	1 310	15.3
1979	CCCCCCCCCCCC	MANUAL	1 180	APR	21		47	SEP	12		26 300	APR	26		1 030 000	2 800	1 390	14.6
1980	CCCCCCCCCCCC	MANUAL	845	APR	17		27	MAR	20		7 280	APR	17		108 000	290	1 330	15.3
1981	CCCCCCCCCCCC	MANUAL	306	APR	05		11	SEP	25		1 190	APR	02		35 700	97.7	1 270	15.9
1982	CCCCCCCCCCCC	MANUAL	1 180	APR	19		8	MAR	29		28 100	APR	18		265 000	727	1 240	15.7
1983	CCCCCCCCCCCC	MANUAL	985	APR	19		41	DEC	14		17 600	APR	19		485 000	1 270	1 240	14.8
1984	CCCCCCCCCCCC	MANUAL	859	JUN	20		16	MAR	22		3 540	JUN	22		81 500	250	1 200	15.2
1985	CCCCCCCCCCCC	MANUAL	1 500	JUN	13		28	NOV	26		18 000	APR	11		339 000	938	1 190	14.7

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

ASSINIBOINE RIVER NEAR HOLLAND - STATION NO. 05MH005

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 49 41 54 N LONG 98 53 56 W
DRAINAGE AREA: 152 000 km²
TYPE OF FLOW: REGULATED
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 299 000 TONNES FOR THE PERIOD JAN 01 TO DEC 31

REMARKS:

DAY	JAN DAILY DISCHARGE (m³/s)	JAN MEAN CONCENTRATION (mg/L)	JAN DAILY LOAD (t)	FEB DAILY DISCHARGE (m³/s)	FEB MEAN CONCENTRATION (mg/L)	FEB DAILY LOAD (t)	MAR DAILY DISCHARGE (m³/s)	MAR MEAN CONCENTRATION (mg/L)	MAR DAILY LOAD (t)	DAY
1	21.9 B	53	100	9.73 B	40	33.6	22.2 B	35	67.1	1
2	20.8 B	53	93.5	15.7 B	39	52.9	23.7 B	34	69.6	2
3	20.4 B	53	93.4	16.5 B	39	55.6	23.1 B	34	67.9	3
4	20.3 B	53	93.0	17.4 B	38	57.1	22.6 B	34	66.4	4
5	21.1 B	52	94.8	17.8 B	36 S	58.4	16.9 B	34	49.6	5
6	20.7 B	51	91.2	18.7 B	36	61.4	20.7 B	33	59.0	6
7	19.8 B	49 S	84.3	18.7 B	36	61.4	21.8 B	33	62.4	7
8	17.1 B	49	72.4	18.4 B	36	60.4	23.9 B	33	68.1	8
9	17.3 B	48	71.3	18.4 B	37	58.8	23.4 B	35	70.8	9
10	20.2 B	48	83.8	17.3 B	37	55.3	24.0 B	38	78.8	10
11	18.8 B	48	78.0	18.8 B	37	60.1	23.7 B	39	79.9	11
12	18.6 B	47	75.5	18.9 B	37	63.6	23.9 B	41	84.7	12
13	18.3 B	47	74.3	20.6 B	37	65.9	24.4 B	42 S	88.5	13
14	17.6 B	46	69.9	20.4 B	37	65.2	24.5 B	44	93.1	14
15	18.4 B	46	73.1	20.4 B	36	63.5	24.6 B	45	95.8	15
16	17.9 B	46	71.1	20.2 B	36	62.8	25.2 B	46	100	16
17	17.4 B	45	67.7	20.5 B	36	63.8	25.3 B	43	94.0	17
18	16.8 B	45	65.3	20.0 B	36	62.2	25.3 B	44	100.0	18
19	17.1 B	45	76.5	18.9 B	36	58.8	29.0 B	46	115	19
20	15.6 B	44	60.1	18.5 B	36	60.7	28.4 B	46	113	20
21	14.2 B	44	54.0	18.7 B	36	61.3	31.4 B	48	133	21
22	15.9 B	44	60.4	20.7 B	35	62.6	44.3 B	70	268	22
23	18.6 B	44	71.5	20.8 B	35	62.9	59.0 B	104	530	23
24	18.7 B	43	69.5	20.3 B	35	61.4	81.1 B	179	1 410	24
25	17.6 B	43	65.4	21.1 B	35	63.8	124 B	268	3 090	25
26	17.1 B	43	63.5	19.7 B	35	59.6	191 B	423 S	6 880	26
27	15.2 B	42	55.2	20.0 B	35	60.5	236 B	528	10 800	27
28	15.2 B	42	56.6	21.3 B	35	64.4	247 B	422	9 010	28
29	15.1 B	41	53.5				217 B	218 S	4 090	29
30	15.3 B	41	54.2				171 B	186 S	2 780	30
31	15.3 B	40	52.9				146 B	131 S	1 650	31
TOTAL	555.7		2 238.0	531.43		1 678.0	2 035.5		42 334.5	TOTAL

DAY	APR DAILY DISCHARGE (m³/s)	APR MEAN CONCENTRATION (mg/L)	APR DAILY LOAD (t)	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	DAY
1	136 B	175 S	2 060	93.0	276 S	2 220	71.4	121	746	1
2	131 B	433 S	4 900	97.5	269 S	2 270	70.5	129	787	2
3	161 B	594 S	9 235	100	268 S	2 320	68.5	129	763	3
4	158 B	721 S	9 730	101	271 S	2 380	67.6	126	736	4
5	143 B	516 S	6 380	98.1	273 S	2 340	67.5	122 S	712	5
6	127	403	4 430	95.6	270 S	2 250	66.6	120	691	6
7	121	310	3 240	93.5	265 S	2 060	65.4	123	695	7
8	118	248 S	2 540	91.8	230 S	1 830	65.5	136	781	8
9	122	243 S	2 580	90.2	214	1 670	65.5	155	877	9
10	130	289 S	3 290	88.2	205 S	1 560	65.4	161 S	910	10
11	147	435 S	5 520	87.2	202 S	1 520	64.1	149 S	825	11
12	174	649 S	9 760	87.1	202 S	1 520	63.3	136	744	12
13	184	758 S	12 100	87.8	199 S	1 510	64.2	130 S	721	13
14	179	755 S	11 700	87.4	214 S	1 620	64.7	133 S	743	14
15	168	729 S	10 500	85.4	235 S	1 730	65.5	134	758	15
16	151	631 S	8 230	83.3	227	1 630	65.8	133	769	16
17	143	594 S	8 188	82.0	220	1 560	66.8	132	763	17
18	139	462 S	5 790	80.8	213	1 490	67.0	132	764	18
19	137	544 S	6 440	78.6	207	1 420	65.8	132	750	19
20	135	538 S	6 280	78.1	194 S	1 310	64.3	131	728	20
21	131	539	5 880	77.1	174	1 180	63.0	129	702	21
22	128	500 S	5 570	76.4	156 S	1 030	60.8	128	674	22
23	124	455 S	4 870	75.7	151 S	988	58.0	128	641	23
24	120	415 S	4 300	74.1	148	935	55.3	127 S	607	24
25	117	375 S	3 780	72.6	138	868	54.3	123	577	25
26	113	343 S	3 350	71.5	130	803	52.2	118	532	26
27	109	318 S	3 000	70.9	124	760	49.1	113	478	27
28	103	323 S	2 870	70.4	119	724	44.1	109	415	28
29	94.6	399 S	3 440	69.7	116 S	699	39.0	104	350	29
30	90.1	383 S	3 300	69.4	114 S	684	35.0	100	302	30
31				70.4	113	691				31
TOTAL	4 019.7		185 170	2 588.5		45 532	1 838.6		20 942	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

MANITOBA

ASSINIBOINE RIVER NEAR HOLLAND - STATION NO. 05MH005

SUSPENDED SEDIMENT FOR 1985

DAY	JUL DAILY DISCHARGE (m^3/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m^3/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	DAY
1	31.0	84	252	16.1	37	51.5	27.5	76	181	1
2	28.1	89 S	224	16.0	42	58.1	28.3	75	183	2
3	27.1	86	201	16.2	47 S	65.8	28.8	75	185	3
4	25.6	81 S	179	20.7	78	141	28.0	76	184	4
5	25.1	78	169	22.1	89	189	28.7	76	188	5
6	24.6	76	162	23.0	93 S	177	29.0	76	190	6
7	24.1	73	152	21.5	89	166	29.1	76	191	7
8	23.7	70	143	21.6	85	159	27.6	76	183	8
9	23.4	66	133	21.0	81	147	26.6	75 S	172	9
10	22.9	61	121	18.4	77	122	25.7	72	160	10
11	22.5	59	115	16.6	73	105	24.1	66	137	11
12	21.8	57	107	16.4	75	108	22.6	57	11.	12
13	20.8	55	98.8	18.0	84	131	21.6	48	89.6	13
14	19.9	52	89.4	19.7	81	138	21.0	43 S	78.0	14
15	18.4	49	77.9	18.8	76	124	20.8	43	77.3	15
16	17.8	46	70.7	17.4	75	113	20.7	42	75.1	16
17	18.2	43	67.6	24.6	95	202	20.2	42	73.3	17
18	17.1	40 S	59.1	25.4	92	202	19.6	40	67.7	18
19	17.7	39	59.6	25.8	85	189	19.6	40	67.7	19
20	17.2	38 S	56.6	23.5	78	158	20.7	38	68.0	20
21	16.9	35	51.1	22.5	73	142	21.8	38	71.9	21
22	16.3	32 S	45.1	22.2	72 S	138	24.4	37	78.0	22
23	15.5	30	40.2	23.4	72	146	28.2	38	87.7	23
24	14.8	28	35.8	24.6	73	158	31.0	34	91.1	24
25	15.3	26	34.4	26.1	74	167	33.0	34	95.9	25
26	14.9	23	29.6	27.1	73	171	34.3	35	104	26
27	14.4	22 S	27.4	26.3	74	168	33.4	35	101	27
28	13.9	23	27.6	25.5	75	165	31.2	35	94.3	28
29	14.5	25	31.5	25.6	75	165	29.0	34	85.2	29
30	15.3	29 S	38.3	26.3	75	170	28.0	34	82.3	30
31	16.2	33	46.2	27.1	76	178				31
TOTAL	618.1		2 944.8	678.8		4 513.4	784.5		3 594.1	TOTAL

DAY	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DEC DAILY DISCHARGE (m^3/s)	DEC MEAN CONCENTRATION (mg/L)	DEC DAILY LOAD (t)	DAY
1	27.7	33	79.0	32.2	28	77.9	34.8 B	22	66.3	1
2	27.8	33 S	79.5	31.3	28	75.7	35.6 B	22	67.7	2
3	28.6	33	81.3	30.3	28	73.3	35.6 B	22	67.7	3
4	27.7	33	79.0	30.3	27	70.7	35.8 B	23	71.3	4
5	27.6	33	78.7	29.9	27	69.8	35.7 B	23	70.9	5
6	27.1	33	77.3	30.3	27	70.7	35.7 B	23	70.9	6
7	27.0	33	77.0	30.4	27	70.9	33.6 B	24	69.7	7
8	27.6	33	78.7	29.5 B	27	68.8	31.7 B	24	65.7	8
9	28.1	33	80.1	32.6 B	27	76.0	30.9 B	25	66.7	9
10	28.6	32	78.6	37.2 B	26	83.6	30.2 B	25	65.2	10
11	29.1	32	80.5	28.4 B	26	63.8	30.1 B	25	65.0	11
12	29.4	32	81.3	35.2 B	26	79.1	30.6 B	26	68.7	12
13	28.6	32	79.1	39.5 B	26	88.7	30.7 B	26	69.0	13
14	28.6	32	79.1	40.1 B	25	86.6	29.9 B	26	67.2	14
15	28.7	32	79.3	40.6 B	25	87.7	28.4 B	27	66.3	15
16	28.4	32	78.5	40.4 B	25	87.3	26.9 B	27	62.8	16
17	28.5	32	78.8	39.5 B	24	81.9	26.1 B	26	60.7	17
18	28.3	31	75.8	39.0 B	24	80.9	25.3 B	26	61.2	18
19	29.6	31	79.3	38.4 B	23	76.3	26.4 B	26	64.8	19
20	29.6	30	76.7	37.5 B	23	74.5	24.6 B	28	62.1	20
21	28.8	30	74.6	37.1 B	22	70.5	24.2 B	29	60.5	21
22	28.1	29	72.9	36.2 B	22	68.8	24.7 B	29	61.9	22
23	32.1	29	80.4	35.7 B	22	67.9	25.3 B	30	65.5	23
24	35.3	29	88.4	35.2 B	21	63.9	26.4 B	30	68.4	24
25	35.6	29	89.2	34.6 B	21	62.8	25.7 B	30	66.6	25
26	35.3	29	88.4	34.1 B	20	58.9	24.8 B	31	66.4	26
27	35.0	28	84.7	35.8 B	20 S	62.0	23.6 B	31	61.6	27
28	34.9	28	84.4	32.8 B	20	56.7	24.8 B	31	66.7	28
29	34.1	28	82.5	32.2 B	21	58.4	25.2 B	31	67.5	29
30	33.3	28	80.6	33.1 B	21	60.1	25.1 B	32	69.4	30
31	33.1	28 S	80.1				23.3 B	32	64.4	31
TOTAL	933.4		2 484.8	1 039.5		2 174.2	891.0		2 049.0	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

ASSINIBOINE RIVER NEAR HOLLAND - STATION NO. 05MH005

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
JAN 07	11:30	0.5	19.8	B	52.0	X	DH48	50		853														
FEB 05	12:45	0.5	17.5	B	44.0	X	DH48	38		837														
MAR 13	14:00	0.5	2.98	B	24.0	M	DH48	44		886														
MAR 13	14:03	0.5	5.03	B	36.0	M	DH48	44		890														
MAR 13	14:05	0.5	4.44	B	48.0	M	DH48	42		891														
MAR 13	14:08	0.5	5.08	B	60.0	M	DH48	41		892														
MAR 13	14:10	0.5	5.26	B	76.0	M	DH48	41		878														
MAR 26	12:45	0.5	188		B	MID		DH59	424		387	24	38	51	63	65	83	86	93	100		7	68	25
MAR 29	14:00	0.5	213		B	MID		DH59	189															
MAR 30	17:00	0.5	171		W	MID		DH59	197															
MAR 31	10:00	0.5	146		W	MID		DH59	125															
APR 01	08:00	0.5	136		W	MID		DH59	146															
APR 01	19:00	0.5	136		W	MID		DH59	208															
APR 02	09:00	0.5	131		W	MID		DH59	283	C														
APR 02	19:00	0.5	.31		W	MID		DH59	884	C														
APR 03	08:30	0.5	181		W	MID		DH59	318	C														
APR 03	19:00	0.5	181		W	MID		DH59	928		304	10	13	23	35	55	89	76	93	99	100	31	55	13
APR 04	08:30	1.0	186		W	MID		DH59	777		302	13	17	28	40	62	80	87	95	100		20	63	17
APR 04	12:20	2.0	25.5	B	88.0	M	DH59	732		276	8	14	26	44	64	83	92	99	100		17	69	14
APR 04	12:35	2.0	32.4	B	72.0	M	DH59	713		276	11	15	26	40	62	79	87	95	100		21	64	15
APR 04	12:40	2.0	29.0	B	56.0	M	DH59	677		287	12	17	27	41	64	80	87	95	100		20	63	17
APR 04	12:45	2.0	32.9	B	44.0	M	DH59	697		281	11	15	26	39	59	77	85	96	100		23	62	15
APR 04	12:50	2.0	42.1	B	28.0	M	DH59	572		288	11	15	27	43	71	91	96	99	100		9	76	15
APR 04	13:10	2.0	156		W	MID		DH59	884		307	10	13	23	36	59	78	83	93	100		24	63	13
APR 05	08:30	2.0	143		W	MID		DH59	586	C														
APR 08	08:00	2.0	116			MID		DH59	1010	A														
APR 08	19:00	3.0	116			MID		DH59	286	C														
APR 09	08:00	3.0	119			MID		DH59	364	C														
APR 09	11:10	3.0	31.8			24.0	M	DH59	183		376													
APR 09	11:15	3.0	30.8			40.0	M	DH59	219		380													
APR 09	11:20	3.0	22.9			56.0	M	DH59	235		372													
APR 09	11:25	3.0	17.7			88.0	M	DH59	207		361													
APR 09	11:30	3.0	24.2			80.0	M	DH59	213		367													
APR 09	11:50	3.0	120			MID		DH59	235	C	384													
APR 10	08:00	4.0	128			MID		DH59	318	C														
APR 11	08:30	4.0	142			MID		DH59	366	C														
APR 11	18:00	5.0	152			MID		DH59	556	C														
APR 12	08:00	4.0	178			MID		DH59	528	C														
APR 12	08:00	5.0	182			MID		DH59	722		321	13	24	33	53	70	78	85	95	100		31	55	24
APR 12	18:00	5.0	187			MID		DH59	719	C														
APR 14	11:00	5.0	180			MID		DH59	700		305	19	27	43	58	80	86	88	97	100		14	59	27
APR 15	08:00	5.0	188			MID		DH59	681															
APR 15	08:00	5.0	183			MID		DH59	612															
APR 16	18:00	5.0	147			MID		DH59	569															
APR 17	08:30	5.0	141			MID		DH59	475															
APR 17	10:30	5.0	23.2			84.0	M	DH59	449		378	31	48	67	79	88	91	93	99	100		9	43	48
APR 17	10:35	5.0	23.9			64.0	M	DH59	487		376	21	37	57	72	81	85	88	97	100		15	48	37
APR 17	10:40	5.0	28.7			56.0	M	DH59	520		377	22	39	46	55	62	85	89	95	99	100	35	36	29
APR 17	10:45	5.0	36.0			40.0	M	DH59	486		381	25	38	58	67	76	79	83	93	99	100	21	41	38
APR 17	10:50	5.0	26.1			24.0	M	DH59	433		388	37	47	59	82	92	96	98	100			4	48	47
APR 17	11:10	5.0	141			MID		DH59	388		389	29	38	60	71	80	85	89	97	100		15	48	38
APR 18	08:00	7.0	138			MID		DH59	444															
APR 18	18:00	7.0	138			MID		DH59	470															
APR 19	08:00	8.0	137			MID		DH59	518															
APR 20	10:00	9.0	135			MID		DH59	513															
APR 22	08:00	9.0	128			MID		DH59	487															
APR 23	08:00	10.0	124			MID		DH59	448															
APR 24	08:30	10.0	120			MID		DH59	417		417													
APR 25	09:00	10.0	117			MID		DH59	385															
APR 26	08:30	9.0	113			MID		DH59	364															
APR 27	09:00	9.0	109			MID		DH59	318															
APR 28	09:00	11.0	103			MID		DH59	331															
APR 29	08:00	12.0	95.5			MID		DH59	294															
APR 30	08:00	12.0	89.3			MID		DH59	3740	C														
MAY 01	08:00	12.0	92.1			MID		DH59	2250	C	467													
MAY 02	08:00	12.0	86.8			MID		DH59	1880	C														
MAY 03	08:00	13.0	89.9			MID		DH59	270															
MAY 04	08:00	14.0	101			MID		DH59	265															
MAY 05	11:00	14.0	98.1			MID		DH59	279															
MAY 06	08:00	13.0	97.3			MID		DH59	277															
MAY 07	08:00	13.0	93.7			MID		DH59	256		494													
MAY 08	08:00	14.0	92.0			MID		DH59	248															
MAY 08	10:15	15.0	11.1			88.0	M	DH59	181	C	489													
MAY 08	10:20	15.0	19.3			56.0	M	DH59	227	C	486													
MAY 08	10:25	15.0	19.0			52.0	M	DH59	270	C	473													
MAY 08	10:30	15.0	23.1			40.0	M	DH59	230	C	476													
MAY 08	10:35	15.0	17.3			24.0	M	DH59	213	C	467													
MAY 08	11:50	15.0	81.9			MID		DH59	237	C	470													
MAY 10	11:00	15.0	88.1			MID		DH59	216															
MAY 11	09:00	15.0	87.1			MID		DH59	209															
MAY 12	11:00	13.0	87.0			MID		DH59	211															
MAY 13	08:00	11.0	87.5			MID		DH59	211															
MAY 14	08:00	11.0	87.7			MID		DH59	218	C	488													
MAY 15	08:30	11.0	85.7			MID		DH59	257	C														
MAY 20	11:00	15.0	78.0			MID		DH59	218	C														
MAY 22	08:30	16.0	78.4			MID		DH59	178		512													
MAY 23	09:00	15.0	75.6			MID		DH59	174															
MAY 28	09:00	15.0	69.7			MID		DH59	134	C														
MAY 30	10:10	15.0	5.22			88.0	M	DH59	107		488													
MAY 30	10:15	15.0	11.5			72.0	M	DH59	108		485													
MAY 30	10:20	15.0	18.5			56.0	M	DH59	122		484													
MAY 30	10:25	15.0	20.0			40.0	M	DH59	114		487													
MAY 30	10:30	15.0	12.8			24.0	M	DH59	110		485													
MAY 30	10:45	15.0	69.2			MID		DH59	138		490													
JUN 05	13:00	15.0	87.7			MID		DH59	186															
JUN 10	08:00	15.0	85.5			MID		DH59	210		482													
JUN 11	18:00	17.0	83.6			MID		DH59	187															
JUN 13	09:00	18.0	84.3			MID		DH59	186															
JUN 14	08:00	17.0	84.4			MID		DH59	171															
JUN 24	18:00	18.0	85.0			MID		DH59	151		495													
JUL 02	08:00	19.0	29.5			MID		DH59	97		512													

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1985

DISCHARGE SYMBOL(S): B - ICE CONDITIONS W - DAILY MEAN; ICE CONDITIONS
CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT A - CLASSIFIED AS AN ANOMALY
VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL M - A SEDIMENT MEASUREMENT VERTICAL

CONTINUED

MANITOBA

ASSINIBOINE RIVER NEAR HOLLAND - STATION NO. 05MH005 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)	SINGLE VERTICAL SAMPLING (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
JUL 04	12:20	23.0	3.05	80.0 M	DH59	86	506														
JUL 04	12:25	23.0	5.88	84.0 M	DH59	81	517														
JUL 04	12:30	23.0	6.23	82.0 M	DH59	84	511														
JUL 04	12:35	23.0	6.20	40.0 M	DH59	83	512														
JUL 04	12:40	23.0	4.49	24.0 M	DH59	81	517														
JUL 04	13:00	23.0	25.4	MID	DH59	86	510														
JUL 18	09:00	21.0	17.2	MID	DH59	40	576														
JUL 20	09:00	20.0	17.1	MID	DH59	35															
JUL 22	07:00	20.0	16.2	MID	DH59	33															
JUL 27	09:00	21.0	14.1	MID	DH59	21	591														
JUL 30	08:00	19.0	15.3	MID	DH59	27															
AUG 03	08:00	21.0	16.1	MID	DH59	45	597														
AUG 06	08:00	20.0	21.7	MID	DH59	94															
AUG 22	11:00	17.0	6.37	86.0 M	DH59	67	503														
AUG 22	11:05	17.0	4.06	86.0 M	DH59	75	503														
AUG 22	11:10	17.0	3.45	48.0 M	DH59	72	503														
AUG 22	11:15	17.0	4.88	40.0 M	DH59	76	510														
AUG 22	11:20	17.0	3.19	24.0 M	DH59	70	505														
AUG 22	13:00	17.0	21.8	MID	DH59	71	504														
SEP 09	14:00	14.0	26.4	MID	DH59	75	490														
SEP 16	10:00	15.0	21.0	MID	DH59	45															
OCT 02	10:10	8.0	6.27	28.0 M	DH59	33	513														
OCT 02	10:15	8.0	7.79	44.0 M	DH59	34	521														
OCT 02	10:20	8.0	5.42	86.0 M	DH59	35	521														
OCT 02	10:25	8.0	5.37	88.0 M	DH59	34	515														
OCT 02	10:30	8.0	2.86	84.0 M	DH59	29	513														
OCT 02	11:00	8.0	26.8	MID	DH59	36	517														
OCT 31	12:40	4.0	3.08	84.0 M	DH59	23	591														
OCT 31	12:45	4.0	7.73	84.0 M	DH59	26	584														
OCT 31	12:50	4.0	7.56	52.0 M	DH59	31	583														
OCT 31	12:55	4.0	7.36	40.0 M	DH59	28	604														
OCT 31	13:00	4.0	5.80	28.0 M	DH59	26	601														
OCT 31	13:30	4.0	33.1	MID	DH59	30	597														
NOV 27	11:50	0.5	5.19 S	28.0 M	DH48	18	577														
NOV 27	11:55	0.5	8.61 S	40.0 M	DH48	20	576														
NOV 27	12:00	0.5	10.1 S	56.0 M	DH48	21	582														
NOV 27	12:05	0.5	8.96 S	68.0 M	DH48	21	572														
NOV 27	12:10	0.5	2.79 S	84.0 M	DH48	17	570														

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1985

DISCHARGE SYMBOL(S): S - ICE CONDITIONS
VERTICAL SYMBOL(S): M - A SEDIMENT MEASUREMENT VERTICAL

ASSINIBOINE RIVER NEAR HOLLAND - STATION NO. 05MH005

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY : JAN-DEC MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	HISTORICAL STANDARD ERROR OF MEAN %
1970	------CCCCC-	MANUAL	743	JUL 26	16	OCT 12	5 310	JUL 26	113 000	---	---	---
1971	---CCCCCC---	MANUAL	1 620	APR 17	29	SEP 17	22 800	APR 17	486 000	---	---	---
1972	---CCCCCCCC-	MANUAL	1 300	APR 16	25	AUG 20	28 300	APR 16	701 000	---	---	---
1973	---CCCCCC---	MANUAL	455	JUL 08	39	APR 30	1 070	JUL 05	38 000	---	---	---
1974	CCCCCCCCCCCC	MANUAL	1 880	APR 20	8	FEB 12	98 800	APR 20 *	1 320 000	3 810	3 610	---
1975	CCCCCCCCCCCC	MANUAL	1 340	APR 21	24	JAN 07	36 300	APR 30	1 340 000	3 670	3 840	0.8
1976	CCCCCCCCCCCC	MANUAL	1 310	APR 08	23	OCT 29	98 400	APR 12	1 910 000 *	5 230	4 170	12.7
1977	CCCCCCCCCCCC	MANUAL	128	MAY 22	14	MAR 14	529	JUL 13	44 700	122	3 160	24.2
1978	CCCCCCCCCCCC	MANUAL	946	APR 10	19	JAN 12	14 800	APR 09	189 000	483	2 620	38.0
1979	CCCCCCCCCCCC	MANUAL	2 670	APR 22	26	SEP 21	76 100	APR 23	1 830 000	4 670	2 930	29.7
1980	CCCCCCCCCCCC	MANUAL	590	APR 17	22	OCT 21	4 970	APR 17	73 700	201	2 540	32.7
1981	CCCCCCCCCCCC	MANUAL	300	AUG 27	20	JAN 05	493	AUG 26	33 100	90.7	2 230	35.1
1982	CCCCCCCCCCCC	MANUAL	1 780	APR 15	8	OCT 18 *	27 000	APR 15	314 000	861	2 080	34.0
1983	CCCCCCCCCCCC	MANUAL	1 250	APR 21	25	OCT 13	29 700	APR 11	575 000	1 580	2 030	31.2
1984	CCCCCCCCCCCC	MANUAL	326	JUL 10	11	SEP 25	989	APR 06	49 800	135	1 860	32.2
1985	CCCCCCCCCCCC	MANUAL	3 740	APR 30 *	17	NOV 27	13 100	APR 13	299 000	820	1 770	31.3

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH * - EXTREME FOR PERIOD OF RECORD

EDWARDS CREEK DRAIN BELOW JACKFISH CREEK - STATION NO. 05LJ047

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 51 08 30 N LONG 99 55 20 W
DRAINAGE AREA: 311 km²
TYPE OF FLOW: REGULATED
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD IS 100 TONNES FOR THE PERIOD MAR 01 TO OCT 31

REMARKS:

	MAR			APR			MAY			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	0 B	0	0	10.4 B	30 S	27.0	1.38	81	9.66	1
2	0 B	0	0	15.4 B	225 S	299	1.25	77	8.32	2
3	0 B	0	0	5.89	124 S	61.0	1.15	70	7.02	3
4	0 B	0	0	3.80	142 S	46.2	1.13	57	5.57	4
5	0 B	0	0	2.48	115 S	24.6	1.07	49	4.53	5
6	0 B	0	0	2.10	132 S	24.0	0.978	45 S	3.80	6
7	0 B	0	0	1.88	130 S	18.9	0.881	42	3.12	7
8	0 B	0	0	1.23	82	8.78	0.849	40	2.24	8
9	0 B	0	0	1.57	83 S	8.55	0.882	41	2.42	9
10	0 B	0	0	2.85	71	18.1	0.841	34	1.88	10
11	0 B	0	0	3.22	97 S	27.0	0.858	34	1.93	11
12	0 B	0	0	3.84	126	43.6	0.758	37	2.42	12
13	0 B	0	0	3.84	161	53.4	1.32	44	5.02	13
14	0 B	0	0	7.81	864 S	437	1.61	49	6.82	14
15	0 B	0	0	11.1	1 370	1 310	1.22	46	4.85	15
16	0 B	0	0	9.78	1 180	997	0.979	42	3.55	16
17	0 B	0	0	8.62	1 130	846	0.788	40	2.72	17
18	0 B	0	0	8.89	1 370 S	1 050	0.650	38	2.13	18
19	0 B	0	0	10.9	1 880 S	1 580	0.501	37	1.60	19
20	0 B	0	0	16.3	2 130	3 000	0.434	36	1.35	20
21	0 B	0	0	11.7	1 600	1 620	0.395	35	1.19	21
22	0 B	0	0	8.89	1 190 S	719	0.315	34	0.83	22
23	0 B	0	0	5.54	786 S	381	0.300	33	0.86	23
24	2.14 B	15 S	2.77	4.62	219 S	87.4	0.308	34	0.90	24
25	9.35 B	23 S	18.6	3.76	90	29.2	0.294	38	0.91	25
26	5.48 B	24 S	11.4	2.80	88	22.0	0.256	30	0.66	26
27	7.89 B	34 S	23.2	2.40	87	18.0	0.231	30 S	0.60	27
28	9.38 B	14 S	11.4	2.16	86	16.0	0.236	30	0.61	28
29	6.66 B	24	13.9	1.96	84	14.2	0.212	34	0.62	29
30	6.83 B	33	19.5	1.63	83 S	11.7	0.210	51	0.93	30
31	8.26 B	27	19.2				0.856	243	20.1	31
TOTAL	86.01		119.97	172.86		12 587.63	22.432		108.26	TOTAL

	JUN			JUL			AUG			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	2.28	370	72.9	0.886	16 S	1.20	0.020	20	0.03	1
2	2.95	298 S	76.0	0.488	17	0.89	0.028	19	0.05	2
3	2.59	130 S	29.1	0.289	17	0.42	0.042	20	0.07	3
4	5.30	356	183	0.251	19	0.43	0.150	25	0.32	4
5	5.69	247	121	0.188	17	0.23	0.290	22	0.55	5
6	3.10	86	25.7	0.124	15	0.16	0.129	21	0.23	6
7	1.80	76	11.8	0.125	12	0.13	0.093	20	0.16	7
8	1.12	74	7.18	0.110	14 S	0.13	0.093	19	0.15	8
9	0.791	70	4.78	0.116	15	0.15	0.101	17	0.15	9
10	0.633	69	3.77	0.107	15	0.14	0.100	14	0.12	10
11	0.484	67	2.80	0.090	15	0.12	0.102	12	0.11	11
12	0.420	64	2.32	0.073	15	0.09	0.572	37 S	1.83	12
13	0.362	72	2.25	0.071	15	0.09	4.70	693	281	13
14	0.321	78	2.18	0.094	18	0.15	7.42	1 270 S	816	14
15	0.378	70	2.29	0.131	18	0.20	3.16	340	92.8	15
16	0.338	57	1.88	0.108	18	0.16	1.43	78 S	9.64	16
17	0.340	51	1.50	0.079	18	0.12	2.10	216 S	38.6	17
18	0.435	89	2.59	0.088	18	0.14	3.66	1 140 S	360	18
19	0.324	73	2.04	0.101	20	0.17	1.72	324 S	48.1	19
20	0.251	64	1.39	0.070	19	0.11	0.850	106 S	7.78	20
21	0.228	54	1.06	0.065	18	0.10	0.595	37 S	1.90	21
22	0.227	43	0.84	0.058	18	0.09	0.435	25 S	0.94	22
23	0.223	34	0.66	0.049	17	0.07	1.96	127 S	21.5	23
24	0.211	37	0.67	0.038	16	0.05	8.14	1 180 S	818	24
25	0.244	42	0.89	0.060	16	0.08	3.76	355 S	115	25
26	0.407	59	2.07	0.041	18	0.06	1.80	105 S	17.2	26
27	0.345	59	2.06	0.025	16	0.03	1.05	25 S	2.27	27
28	0.344	122	3.63	0.021	16	0.03	0.704	14 S	0.85	28
29	2.66	164 S	37.7	0.021	17	0.03	0.493	9 S	0.38	29
30	1.62	26	4.09	0.032	16	0.05	0.414	9	0.32	30
31				0.024	19	0.04	0.300	12 S	0.31	31
TOTAL	36.616		589.91	3.956		5.66	46.500		2 633.36	TOTAL

B - ICE CONDITIONS S - SAMPLE(S) COLLECTED THIS DAY

MANITOBA

EDWARDS CREEK DRAIN BELOW JACKFISH CREEK - STATION NO. 05LJ047

SUSPENDED SEDIMENT FOR 1985

DAY	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	DAILY DISCHARGE (m^3/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	0.271	19	0.44	3.17	177 S	48.5				1
2	0.247	23	0.49	3.29	249 S	70.8				2
3	0.300	23 S	0.60	4.29	356	132				3
4	0.281	20	0.45	4.89	550 S	287				4
5	0.344	15	0.45	4.75	538 S	221				5
6	0.713	18 S	1.17	4.05	288 S	100				6
7	0.561	23 S	1.08	3.48	227 S	67.8				7
8	0.503	7 S	0.30	2.98	197 S	50.7				8
9	0.442	4 S	0.15	2.66	150 S	34.5				9
10	0.370	5 S	0.16	2.48	114 S	24.4				10
11	0.288	9 S	0.22	2.51	92 S	20.0				11
12	0.244	11 S	0.23	3.35	378 S	109				12
13	0.216	12 S	0.22	4.23	502 S	183				13
14	0.191	5 S	0.08	3.62	251 S	78.5				14
15	0.217	3	0.08	2.94	151 S	40.9				15
16	0.222	6 S	0.12	2.36	152	31.0				16
17	0.167	7 S	0.11	2.09	126	22.8				17
18	0.137	10	0.12	2.14	81	15.0				18
19	0.230	19	0.38	3.08	55 S	9.85				19
20	1.06	38	3.48	2.10	49	8.89				20
21	1.43	59	7.29	2.13	41	7.55				21
22	2.28	87 S	17.1	2.04	43	7.58				22
23	5.83	344	176	1.94	46	7.71				23
24	3.81	224 S	73.7	1.85	46 S	6.65				24
25	2.48	77	16.5	1.47	41	5.21				25
26	1.76	32	4.87	1.30	34	3.82				26
27	1.88	37 S	6.01	1.12	24	2.32				27
28	2.70	102 S	23.8	1.14 A	15 S	1.48				28
29	3.64	214	67.3	1.10 E	14	1.33				29
30	3.48	165 S	49.3	1.05 E	11	1.00				30
31				0.984 E	11	0.94				31
TOTAL	36.355		452.18	78.404		1 801.39				TOTAL

A - MANUAL GAUGE E - ESTIMATED S - SAMPLE(S) COLLECTED THIS DAY

EDWARDS CREEK DRAIN BELOW JACKFISH CREEK - STATION NO. 05LJ047

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (C)	INSTANT. DISCHARGE (m^3/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR 24	10:30	1.0	2.14	W	9ELB	X	DIP	15	224														
MAR 25	11:30	2.0	9.35	W	10LB		DH59	31															
MAR 25	10:00	2.0	9.35	W	9ELB	X	DIP	27															
MAR 26	11:00	2.0	5.48	W	9ELB	X	DIP	13															
MAR 26	10:15	1.0	5.48	W	9ELB	X	DIP	82															
MAR 27	10:20	1.0	7.89	W	9ELB	X	DIP	37															
MAR 27	20:30	1.5	7.89	W	9ELB	X	DIP	34															
MAR 28	19:30	1.0	9.39	W	9ELB	X	DIP	12	197														
APR 01	17:00	1.0	10.4	W	10LB		DH59	24															
APR 02	10:30	1.0	15.4	W	10LB		DH59	286	200														
APR 03	17:30	2.0	8.30		10LB		DH59	120															
APR 03	19:00	1.0	8.01		10LB		DH59	148	216														
APR 04	10:00	2.0	4.20		10LB		DH59	138															
APR 05	10:10	2.0	2.19		10LB		DH59	108															
APR 06	17:30	2.0	2.48		9ELB	X	DIP	135															
APR 07	17:30	2.0	2.07		9ELB	X	DIP	128															
APR 09	09:00	2.0	0.785		10LB		DH59	82	383														
APR 11	09:30	2.0	2.84		10LB		DH59	82															
APR 14	10:05	3.0	1.68		7.0	M	DH48	729	314	38	48	70	82	93	98	100					2	50	48
APR 14	10:10	3.0	1.88		11.0	M	DH48	844	314	30	47	68	80	93	98	99	100				2	51	47
APR 14	10:15	3.0	2.03		16.0	M	DH48	1010	286	30	46	68	80	93	98	100					2	52	46
APR 14	10:20	3.0	1.79		20.5	M	DH48	1070	284	33	44	67	81	93	98	99	100				2	54	44
APR 14	10:25	3.0	0.861		25.0	M	DH48	1070	282	36	51	70	83	94	98	98	100				2	47	51
APR 14	10:40	3.0	0.53		10LB		DH59	814	298	24	51	88	82	95	97	99	100				3	45	51
APR 18	10:30	8.0	7.86		10LB		DH59	1380	238	21	33	50	71	95	97	98	100				3	64	33
APR 19	17:00	8.0	9.07		10LB		DH59	1700	251	16	33	47	73	95	97	99	100				3	64	33
APR 22	21:30	10.0	5.21		10LB		DH59	1050	242														
APR 23	10:30	9.0	5.05		10LB		DH59	678															
APR 24	17:00	13.0	4.26		10LB		DH59	100															
APR 30	20:00	14.0	1.47		10LB		DH59	82	315														
MAY 06	13:20	12.0	0.955		10LB		DH59	45	348														
MAY 27	12:00	18.0	0.235		10LB		DH59	29	402														
JUN 02	20:00	14.0	2.68		10LB		DH59	235															
JUN 03	18:00	9.0	2.75		10LB		DH59	89	344														
JUN 29	15:00	19.0	3.10		10LB		DH59	80	331														
JUL 01	13:00	20.0	0.821		10LB		DH59	17															
JUL 08	14:30	21.0	0.111		10LB		DH59	15	393														
AUG 12	12:30	14.5	0.053		1.4	M	DH48	15	384														
AUG 12	12:35	14.5	0.089		2.0	M	DH48	13	370														
AUG 12	12:40	14.5	0.097		2.6	M	DH48	13	364														
AUG 12	12:45	14.5	0.078		3.2	M	DH48	14	372														
AUG 12	12:50	14.5	0.091		3.6	M	DH48	13	363														
AUG 12	13:05	14.5	0.486		10LB		DH59	14															
AUG 14	09:00E		8.44		9ELB	X	DIP	1510	280														
AUG 14	14:40	14.0	8.83		10LB		DH59	1040	283	43	59	81	94	98	99	99	100				1	40	59
AUG 16	09:00E		1.52		9ELB	X	DIP	80															
AUG 17	08:55	13.0	1.13		10LB		DH59	45	373														
AUG 17	11:35	14.0	1.43		10LB		DH59	51															
AUG 18	13:20	14.0	3.83		10LB		DH59	1090	294	28	61	81	95	99	99	100					1	38	61
AUG 19	19:35	14.0	1.32		10LB		DH59	217															
AUG 20	18:10	15.0	0.738		10LB		DH59	76															
AUG 21	17:30	14.0	0.557		10LB		DH59	37															
AUG 22	19:30	14.0	0.437		10LB		DH59	20															
AUG 23	17:30	13.0	2.08		10LB		DH59	81															
AUG 24	07:30	14.0	8.84		10LB		DH59	1450	289	32	43	68	84	97	98	99	100				2	55	43
AUG 24	13:10	14.0	8.42		10LB		DH59	1080	283	40	48	73	86	97	97	97	99	100			3	49	48
AUG 25	12:00	17.0	3.63		10LB		DH59	348	324	41	63	82	95	97	98	99	100				2	35	63
AUG 26	09:55	17.0	2.01		10LB		DH59	115															
AUG 27	07:54	16.0	1.17		10LB		DH59	34															
AUG 28	08:30	17.0	0.747		10LB		DH59	18															
AUG 29	07:30	17.0	0.514		10LB		DH59	9															
AUG 31	08:30	18.0	0.320		10LB		DH59	11	419														
SEP 03	07:00	15.0	0.269		10LB		DH59	23															
SEP 04	05:00	13.0	0.784		10LB		DH59	15															
SEP 07	05:00	11.0	0.555		10LB		DH59	27	348														
SEP 08	17:00	15.0	0.484		10LB		DH59	5															
SEP 09	18:00	15.0	0.404		10LB		DH59	4															
SEP 10	20:41	13.0	0.335		10LB		DH59	5															
SEP 11	20:00	14.0	0.285		10LB		DH59	11															
SEP 12	20:37	14.0	0.255		10LB		DH59	9															
SEP 13	13:15	15.0	0.205		10LB		DH59	12															
SEP 14	08:10	17.0	0.173		10LB		DH59	5	438														
SEP 16	07:00	17.0	0.217		10LB		DH59	5															
SEP 17	08:20	12.0	0.206		10LB		DH59	7															
SEP 22	12:30	8.0	1.98		10LB		DH59	75	357														
SEP 24	18:30	7.0	3.24		10LB		DH59	178															
SEP 27	17:30	4.0	2.13		10LB		DH59	38															
SEP 28	14:00	5.0	2.74		10LB		DH59	103															
SEP 30	18:00	7.0	3.34		10LB		DH59	158	363														
OCT 01	19:25	7.0	3.10		10LB		DH59	185															
OCT 02	10:00	8.0	3.15		10LB		DH59	233															
OCT 04	10:35	5.0	4.99		10LB		DH59	889	393	31	51	76	92	98	98	99	100				2	47	51
OCT 05	15:30	7.0	4.80		10LB		DH59	453															
OCT 06	12:00	5.0	4.07		10LB		DH59	278	288														
OCT 07	15:30	4.0	3.32		10LB		DH59	221															
OCT 08	15:30	1.0	3.00		10LB		DH59	188															
OCT 09	15:30	1.0	2.77		10LB		DH59	144															
OCT 10	17:30	4.0	2.63		10LB		DH59	109															
OCT 11	15:30	7.0	2.64		10LB		DH59	90															
OCT 12	07:00	7.0	3.15		10LB		DH59	324	318	40	55	81	94	98	99	100					1	44	55
OCT 13	12:00	5.0	4.28		10LB		DH59	807	283	40	53	77	90	96	99	100					1	46	53
OCT 14	10:00	4.0	3.85		10LB		DH59	282															
OCT 15	12:15	2.0	2.97		10LB		DH59	181															
OCT 19	11:00	4.0	2.16		10LB		DH59	85	316														
OCT 24	08:00	3.0	1.71		10LB		DH59	43															
OCT 28	08:00	3.0	1.14	V	10LB		DH59	14															
OCT 28	12:30	3.0	1.14	V	10LB		DH59	14	333														

NOTE : SINGLE VERTICAL LOCATED AT 10LB (ONE QUARTER THE DISTANCE FROM THE LEFT BANK) FOR 1985

TIME SYMBOL: E - ESTIMATED
DISCHARGE SYMBOL(S): V - DAILY MEAN; MANUAL GAUGE W - DAILY MEAN; ICE CONDITIONS
VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL M - A SEDIMENT MEASUREMENT VERTICAL

MANITOBA

EDWARDS CREEK DRAIN BELOW JACKFISH CREEK - STATION NO. 05LJ047

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)			SAMPLED CONCENTRATION MINIMUM (mg/L)			SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)			SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY : MAR-OCT MEAN LOAD (TONNES)	SUMMARY : MAR-OCT HISTORICAL MEAN LOAD (TONNES)	SUMMARY : MAR-OCT STANDARD ERROR OF MEAN %
1980	--CCCCCCCC--	MANUAL	858	APR 19		7	OCT 08		351	APR 18		1 810	6.55	6.55	---
1981	--CCCCCCCC--	MANUAL	1 920	JUN 15		3	JUL 25	*	995	JUN 15		6 080	24.8	15.7	58.1
1982	--CCCCCCCC--	MANUAL	1 720	APR 23		4	SEP 20		2 080	APR 23		9 760	39.8	23.7	40.8
1983	--CCCCCCCC--	MANUAL	2 530	MAY 15	*	3	APR 11		3 340	APR 25	*	21 200	* 86.7	39.5	43.4
1984	--CCCCCCCC--	MANUAL	2 140	MAY 11		4	MAR 28		740	MAY 11		4 490	18.3	35.2	39.6
1985	--CCCCCCCC--	MANUAL	1 700	APR 19		4	SEP 08		3 000	APR 20		18 100	73.9	41.7	31.4

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH

* - EXTREME FOR PERIOD OF RECORD

ODEI RIVER NEAR THOMPSON - STATION NO. 05TG003

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 55 59 45 N LONG 97 21 23 W
DRAINAGE AREA: 6 130 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 99 100 TONNES FOR THE PERIOD MAY 01 TO SEP 30

REMARKS:

	MAY			JUN			JUL			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	290 E	154 E	3 880	63.5	60	329	177	105 S	1 610	1
2	275 E	149 E	3 540	61.2	65 S	349	164	99 S	1 400	2
3	260 E	143 E	3 210	59.3	64	328	149	94 S	1 210	3
4	250 E	137 E	2 980	57.8	57 S	285	135	89	1 040	4
5	230 E	131 E	2 600	56.1	58	281	123	83 S	882	5
6	222 A	124 S	2 380	54.5	65 S	306	113	79	771	6
7	204	115 S	2 030	53.1	59 S	271	105	75 S	680	7
8	190	98 S	1 610	53.8	61	284	99.0	73	624	8
9	177	91 S	1 390	64.0	75 S	415	94.2	78	635	9
10	162	87 S	1 220	79.8	98	676	89.9	79	614	10
11	150	85	1 100	96.9	122 S	1 020	85.8	72 S	534	11
12	138	85 S	1 010	107	137	1 270	82.2	65 S	462	12
13	131	82	928	108	128 S	1 210	77.7	68	457	13
14	130	79 S	887	106	104 S	952	73.2	75 S	474	14
15	135	81	945	101	91	794	69.7	64	385	15
16	140	80 S	1 090	96.4	93 S	767	66.6	49 S	282	16
17	143	97 S	1 200	92.3	103	821	63.5	48	263	17
18	143	95	1 170	92.2	112 S	892	61.9	49 S	262	18
19	137	88 S	1 040	92.1	111	883	60.2	49 S	255	19
20	129	85	947	89.2	101 S	778	58.1	48	241	20
21	122	84 S	885	84.4	120 S	978	56.5	47 S	229	21
22	114	83	818	113	147	1 440	55.0	47	223	22
23	106	81 S	742	138	173 S	2 080	53.7	48 S	223	23
24	98.7	79 S	674	162	191	2 670	52.3	50 S	228	24
25	92.0	79	628	180	182 S	2 830	51.0	48 S	212	25
26	85.4	84 S	620	195	156 S	2 830	49.8	48 S	207	26
27	80.2	89	617	198	137 S	2 340	50.1	47	203	27
28	76.5	93 S	607	188	134 S	2 290	52.6	43 S	195	28
29	71.3	84	517	184	121 S	2 030	56.7	48	240	29
30	68.0	86 S	388	187	111 S	1 790	61.3	58 S	307	30
31	65.7	58 S	329				63.1	63	343	31
TOTAL	4 814.8		41 942	3 244.6		33 990	2 550.2		15 889	TOTAL

	AUG			SEP						
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	62.8	61 S	331	28.8	23	57.2				1
2	61.0	56 S	295	28.2	26	63.3				2
3	58.5	50	253	28.0	24	58.1				3
4	55.9	46 S	222	27.7	22	52.7				4
5	53.6	45	208	26.9	21	48.8				5
6	51.7	48 S	214	27.5	22	52.3				6
7	50.4	55	240	27.4	22	52.1				7
8	50.6	62 S	271	27.5	24	57.0				8
9	51.7	59 S	264	27.6	34	81.1				9
10	51.4	53	235	27.5	40 S	95.0				10
11	50.7	46 S	202	27.4	37	87.6				11
12	49.6	44	188	27.0	32 S	74.6				12
13	47.9	45 S	186	26.4	26 S	59.3				13
14	46.5	44	177	25.9	25	55.9				14
15	44.9	40 S	155	25.8	30 S	66.4				15
16	43.6	38 S	143	25.6	37	81.8				16
17	42.4	40	147	25.7	41 S	91.0				17
18	41.2	42 S	150	25.2	40	87.1				18
19	39.7	42	144	24.3	36 S	75.6				19
20	38.1	44 S	145	24.9	30 S	64.5				20
21	36.9	60	191	24.6	28	58.3				21
22	35.7	69 S	213	24.8	27 S	57.8				22
23	35.1	54 S	164	24.8	27	57.8				23
24	34.3	46	136	25.1	27 S	58.6				24
25	33.4	40 S	115	25.0	30	64.8				25
26	32.6	31	87.3	25.1	39 S	84.6				26
27	31.1	24 S	64.5	25.9	36 S	80.6				27
28	30.7	22	58.4	26.0	33	74.1				28
29	30.5	22	58.0	25.0	38 S	82.1				29
30	29.8	23	59.2	24.1	41	85.4				30
31	29.4	22	55.9							31
TOTAL	1 351.7		5 373.3	785.5		2 062.7				TOTAL

A - MANUAL GAUGE E - ESTIMATED S - SAMPLE(S) COLLECTED THIS DAY

05DE1 RIVER NEAR THOMPSON - STATION NO. 05TG003

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP.	INSTANT. DISCHARGE	SINGLE SAMPLING VERTICAL	TYPE OF SAMPLER	INSTANT. CONCENT.	DISSOLVED SOLIDS	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES										PERCENT		
								.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	SAND	SILT	CLAY
		(C)	(m^3/s)	(m)		(mg/L)	(mg/L)														
MAY 06	12:42		217	---	PUMP	117															
MAY 06	12:48		217	---	PUMP	124															
MAY 06	15:45		33.7	13.0 M	DH59	120	121														
MAY 06	15:46		44.8	23.0 M	DH59	127	108														
MAY 06	15:59		222	32.0	DH59	127	107														
MAY 06	16:00		54.5	35.0 M	DH59	128	115														
MAY 06	16:01		50.9	51.0 M	DH59	125	113														
MAY 06	16:12		38.0	67.0 M	DH59	125	113														
MAY 07	11:30		205	---	PUMP	118															
MAY 08	11:40		190	---	PUMP	96															
MAY 09	11:50		176	---	PUMP	91															
MAY 10	12:00		162	---	PUMP	87															
MAY 12	12:00		138	---	PUMP	88															
MAY 14	12:00		130	---	PUMP	81															
MAY 15	10:50	5.0	140	32.0	DH59	88	120														
MAY 16	12:00		141	---	PUMP	92															
MAY 17	12:00		144	---	PUMP	100															
MAY 18	12:00		137	---	PUMP	90															
MAY 21	12:10		123	---	PUMP	85															
MAY 23	12:10		107	---	PUMP	118															
MAY 24	12:20		98.8	---	PUMP	81															
MAY 26	12:20		84.9	---	PUMP	88															
MAY 28	12:20		75.7	---	PUMP	99															
MAY 30	12:20		68.0	---	PUMP	57															
MAY 31	12:20		65.8	---	PUMP	61															
JUN 02	12:20		61.3	---	PUMP	71															
JUN 04	12:30		58.2	---	PUMP	80															
JUN 06	12:30		54.5	---	PUMP	72															
JUN 07	12:30		53.3	---	PUMP	62															
JUN 09	12:30		53.2	---	PUMP	82															
JUN 11	12:30		98.2	---	PUMP	135															
JUN 13	12:35		105	---	PUMP	140															
JUN 14	12:35		108	---	PUMP	112															
JUN 16	12:40		94.2	---	PUMP	102															
JUN 18	12:45		92.9	---	PUMP	125															
JUN 20	12:50		88.6	---	PUMP	110															
JUN 21	12:50		93.7	---	PUMP	112															
JUN 23	12:50		138	---	PUMP	197															
JUN 25	12:50		178	---	PUMP	208															
JUN 26	12:50		186	---	PUMP	176															
JUN 27	12:50		188	---	PUMP	153															
JUN 28	12:50		187	---	PUMP	154															
JUN 29	12:50		184	---	PUMP	137															
JUN 30	12:50		167	---	PUMP	128															
JUL 01	12:50		177	---	PUMP	121															
JUL 02	12:50		184	---	PUMP	114															
JUL 03	09:30		151	---	PUMP	80															
JUL 05	12:10		122	---	PUMP	97															
JUL 07	12:10		104	---	PUMP	87															
JUL 11	12:10		85.7	---	PUMP	85															
JUL 12	12:10		81.4	---	PUMP	77															
JUL 14	12:15		73.3	---	PUMP	90															
JUL 16	12:15		66.5	---	PUMP	58															
JUL 18	12:10		62.1	---	PUMP	59															
JUL 19	12:10		60.7	---	PUMP	59															
JUL 21	12:10		56.4	---	PUMP	57															
JUL 23	12:10		53.8	---	PUMP	58															
JUL 24	11:20		52.5	---	PUMP	62															
JUL 24	11:21		52.5	---	PUMP	47															
JUL 25	11:20		51.0	---	PUMP	58															
JUL 26	11:20		50.0	---	PUMP	59															
JUL 28	11:20		52.4	---	PUMP	53															
JUL 30	11:30		61.3	---	PUMP	74															
AUG 01	11:30		63.0	---	PUMP	77															
AUG 02	11:30		60.8	---	PUMP	71															
AUG 04	11:40		55.8	---	PUMP	57															
AUG 06	11:40		51.8	---	PUMP	60															
AUG 08	11:40		50.5	---	PUMP	80															
AUG 09	11:45		51.9	---	PUMP	78															
AUG 11	11:45		50.7	---	PUMP	80															
AUG 13	11:50		47.9	---	PUMP	58															
AUG 15	11:50		45.2	---	PUMP	53															
AUG 16	11:50		43.6	---	PUMP	50															
AUG 18	11:55		41.1	---	PUMP	55															
AUG 20	11:55		38.2	---	PUMP	57															
AUG 22	12:00		35.8	---	PUMP	95															
AUG 23	12:00		35.1	---	PUMP	70															
AUG 25	12:00		33.7	---	PUMP	54															
AUG 27	12:00		31.2	---	PUMP	31															
SEP 10	10:15		27.6	---	PUMP	54															
SEP 10	12:00		27.6	---	PUMP	52															
SEP 10	12:35		27.6	32.0	DH59	42	147														
SEP 12	12:00		27.0	---	PUMP	45															
SEP 13	12:00		26.3	---	PUMP	38															
SEP 15	12:00		25.4	---	PUMP	43															
SEP 17	12:00		25.5	---	PUMP	81															
SEP 19	12:00		24.1	---	PUMP	53															
SEP 20	12:00		25.0	---	PUMP	43															
SEP 22	12:00		24.9	---	PUMP	40															
SEP 24	12:00		25.1	---	PUMP	40															
SEP 26	12:00		25.0	---	PUMP	80															
SEP 27	12:00		26.0	---	PUMP	54															
SEP 29	12:00		25.1	---	PUMP	58															
OCT 01	12:00		23.7	---	PUMP	59															
OCT 03	12:00		23.3	---	PUMP	88															
OCT 04	12:00		23.0	---	PUMP	68															
OCT 06	12:00		22.9	---	PUMP	71															

NOTE : SINGLE VERTICAL IS UNDETERMINED FOR 1985

VERTICAL SYMBOL(S): M - A SEDIMENT MEASUREMENT VERTICAL

DDEI RIVER NEAR THOMPSON - STATION NO. 05TG003

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY : MAY-SEP MEAN LOAD (TONNES)	SUMMARY : MAY-SEP HISTORICAL MEAN LOAD (TONNES)	SUMMARY : MAY-SEP STANDARD ERROR OF MEAN %
1979	----P-PPC---	DUAL	114 MAY 28		23 SEP 14		1 100 MAY 28		7 550	---	---	---
1980	----CCCCC---	DUAL	189 AUG 26		32 JUL 18		1 870 AUG 26		44 800	283	283	---
1981	----CCCCC---	DUAL	86 MAY 20		10 AUG 27	*	2 570 MAY 18		30 200	197	245	19.6
1982	----CCCCC---	DUAL	101 MAY 10		35 JUL 18		4 230 MAY 03	*	78 400	512	334	27.8
1983	----CCCCP---	DUAL	106 JUL 19		34 SEP 02		1 740 MAY 30		58 800	---	---	---
1984	----CCCCC---	MANUAL	88 JUN 10		21 AUG 29		544 MAY 08		---	175	294	25.2
1985	----CCCCCP--	DUAL	208 JUN 25	*	31 AUG 27		3 880 MAY 01		99 100	* 847	385	25.3

DUAL - MANUAL AND AUTOMATIC SAMPLING MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

MANITOBA

PEMBINA RIVER NEAR WINDYGATES - STATION NO. 05080007

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 49 01 53 N LONG 98 15 40 W
DRAINAGE AREA: 7 500 km²
TYPE OF FLOW: REGULATED
TYPE OF GAUGE: RECORDING

INTERNATIONAL GAUGING STATION

TOTAL SUSPENDED SEDIMENT LOAD 44 700 TONNES FOR THE PERIOD JAN 01 TO DEC 31

REMARKS:

DAY	JAN DAILY DISCHARGE (m³/s)	JAN MEAN CONCENTRATION (mg/L)	JAN DAILY LOAD (t)	FEB DAILY DISCHARGE (m³/s)	FEB MEAN CONCENTRATION (mg/L)	FEB DAILY LOAD (t)	MAR DAILY DISCHARGE (m³/s)	MAR MEAN CONCENTRATION (mg/L)	MAR DAILY LOAD (t)	DAY
1	0 B	0	0	0 B	0	0	0 B	0	0	1
2	0 B	0	0	0 B	0	0	0 B	0	0	2
3	0 B	0	0	0 B	0	0	0 B	0	0	3
4	0 B	0	0	0 B	0	0	0 B	0	0	4
5	0 B	0	0	0 B	0	0	0 B	0	0	5
6	0 B	0	0	0 B	0	0	0 B	0	0	6
7	0 B	0	0	0 B	0	0	0 B	0	0	7
8	0 B	0	0	0 B	0	0	0 B	0	0	8
9	0 B	0	0	0 B	0	0	0 B	0	0	9
10	0 B	0	0	0 B	0	0	0 B	0	0	10
11	0 B	0	0	0 B	0	0	0.001 B	0	0	11
12	0 B	0	0	0 B	0	0	0.001 B	0	0	12
13	0 B	0	0	0 B	0	0	0.001 B	0	0	13
14	0 B	0	0	0 B	0	0	0.001 B	0	0	14
15	0 B	0	0	0 B	0	0	0.023 B	22	0.04	15
16	0 B	0	0	0 B	0	0	0.836 B	64	4.62	16
17	0 B	0	0	0 B	0	0	2.41 B	101	21.0	17
18	0 B	0	0	0 B	0	0	5.27 B	528 S	240	18
19	0 B	0	0	0 B	0	0	12.9 B	917 S	1 020	19
20	0 B	0	0	0 B	0	0	19.1 B	891 S	1 470	20
21	0 B	0	0	0 B	0	0	21.7 B	1 060 S	1 980	21
22	0 B	0	0	0 B	0	0	24.4 B	1 310 S	2 780	22
23	0 B	0	0	0 B	0	0	28.2	1 200 S	2 920	23
24	0 B	0	0	0 B	0	0	28.6	957 S	2 380	24
25	0 B	0	0	0 B	0	0	29.7	923 S	2 370	25
26	0 B	0	0	0 B	0	0	28.0	882 S	1 880	26
27	0 B	0	0	0 B	0	0	22.6	497 S	970	27
28	0 B	0	0	0 B	0	0	19.5	388 S	671	28
29	0 B	0	0				13.2	159 S	181	29
30	0 B	0	0				12.8	283 S	275	30
31	0 B	0	0				12.2	344 S	363	31
TOTAL	0		0	0		0	281.243		19 265.86	TOTAL

DAY	APR DAILY DISCHARGE (m³/s)	APR MEAN CONCENTRATION (mg/L)	APR DAILY LOAD (t)	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	DAY
1	15.1 A	436 S	569	9.73	171	144	2.95	21	5.35	1
2	19.0	837 S	1 370	9.23	157	126	2.87	22 S	5.46	2
3	24.1	1 010 S	2 100	8.72	145	109	2.80	21	5.08	3
4	30.1	917 S	2 380	8.28	135	89.2	2.86	22	5.06	4
5	32.5	810 S	2 270	7.74	119 S	73.6	2.80	21	4.54	5
6	30.5	667 S	1 730	7.48	98	63.3	2.47	20	4.27	6
7	28.4	804 S	1 480	7.34	92 S	58.3	2.46	19	4.04	7
8	26.4 A	541 S	1 230	7.08	82	55.3	2.41	18	3.75	8
9	25.3 E	482 S	1 080	6.87	82	54.6	2.35	17 S	3.38	9
10	24.2 E	474 S	991	6.51	80	50.6	2.34	17	3.44	10
11	22.2 A	462 S	886	6.42	99	54.9	2.54	15	3.29	11
12	21.6	434 S	810	6.36	124 S	68.4	2.67	13	3.00	12
13	20.4	388 S	684	6.28	112	60.8	2.60	12 S	2.69	13
14	19.4	387 S	649	6.08	91 S	47.8	2.45	11	2.33	14
15	18.4	421 S	669	5.87	78	38.6	2.37	12	2.46	15
16	17.6	352 S	532	5.87	83	30.9	2.35	12 S	2.44	16
17	17.2	319	474	5.45	55	26.9	2.36	12	2.47	17
18	16.5	300 S	428	5.11	48	21.2	2.31	11	2.20	18
19	15.9	311 S	427	4.75	40 S	16.4	2.27	10	1.96	19
20	15.5	289 S	390	4.53	37	14.5	2.28	10	1.97	20
21	14.8	273 S	351	4.39	37	14.0	2.24	10	1.94	21
22	14.2	267 S	315	4.19	35	13.7	2.12	10	1.83	22
23	13.8	243 S	289	3.93	32	10.9	2.06	10 S	1.78	23
24	13.3	246	282	3.73	30	8.67	2.01	11	1.91	24
25	12.9	239 S	286	3.84	31	9.48	2.42	25 S	5.06	25
26	12.5	226 S	243	3.38	30 S	8.78	3.81	67	22.1	26
27	11.9	211	217	3.22	28	7.78	4.83	89	27.6	27
28	11.4	202 S	199	3.05	27	7.12	4.20	88	21.4	28
29	10.8	192	179	3.16	30 S	8.18	3.71	49	15.7	29
30	10.3	178	155	3.04	26 S	6.83	3.51	41 S	12.4	30
31				3.07	22	5.84				31
TOTAL	566.3		23 848	174.21		1 304.51	80.45		181.20	TOTAL

A - MANUAL GAUGE B - ICE CONDITIONS E - ESTIMATED S - SAMPLE(S) COLLECTED THIS DAY

PEMBINA RIVER NEAR WINDYGATES - STATION NO. 05OD007

SUSPENDED SEDIMENT FOR 1985

DAY	JUL DAILY DISCHARGE (m^3/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m^3/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	DAY
1	3.45	31	9.24	0.148	7	0.09	0.521	23	1.23	1
2	3.73	33 S	10.8	0.109	7	0.07	0.577	21 S	1.05	2
3	3.39	34	9.95	0.139	8	0.09	0.602	21	1.09	3
4	2.88	30	7.41	0.176	8 S	0.12	0.612	20	1.06	4
5	2.80	27	6.87	0.304	8	0.14	0.627	20	1.03	5
6	2.42 E	24 S	5.02	0.143	8	0.10	0.632	19	1.04	6
7	2.30 E	22	4.37	0.197	8	0.14	0.622	19	1.02	7
8	2.15 E	18	3.53	0.208	8	0.14	0.643	18	1.00	8
9	2.04 E	17	3.00	0.155	7	0.10	0.654	17	0.95	9
10	1.90 E	14	2.30	0.129	7	0.08	0.659	16	0.91	10
11	1.79 E	12	1.86	0.130	8 S	0.09	0.686	15	0.86	11
12	1.58 E	10 S	1.37	0.209	8	0.14	0.687	13	0.77	12
13	1.51 E	8	1.06	0.288	8	0.20	0.694	12	0.72	13
14	1.37 E	8	0.95	0.228	8	0.16	0.699	10	0.60	14
15	1.25 E	9	0.97	0.211	8	0.15	0.719	10 S	0.62	15
16	1.12 E	8	0.77	0.287	115	2.85	0.755	12 S	0.78	16
17	1.03 E	8	0.80	2.00	441 S	111	0.731	12	0.76	17
18	0.906 E	9 S	0.71	1.21	410	42.8	0.709	12	0.74	18
19	0.816 E	8	0.57	1.11	163	15.6	0.695	12	0.69	19
20	0.780 E	8	0.53	0.988	47 S	3.82	0.680	11	0.65	20
21	0.656 E	8	0.45	0.823	44	3.51	0.707	10	0.61	21
22	0.578 E	8	0.40	0.885	44 S	3.39	0.701	9	0.55	22
23	0.523 E	7	0.32	0.730	40	2.69	0.700	8 S	0.48	23
24	0.475 A	7 S	0.29	0.721	38	2.37	0.731	8	0.51	24
25	0.418	10 S	0.38	0.678	35	2.04	0.718	8	0.50	25
26	0.387	11	0.37	0.605	33	1.72	0.752	9	0.58	26
27	0.309	9	0.24	0.563	32	1.61	0.741	13	0.83	27
28	0.219	7 S	0.13	0.593	30	1.54	0.744	17	1.09	28
29	0.183	7	0.12	0.612	28	1.48	0.740	18 S	1.15	29
30	0.175	7	0.11	0.678	26	1.52	0.709	18	1.10	30
31	0.158	8	0.11	0.665	24	1.38				31
TOTAL	43.076		73.97	15.878		200.83	20.697		25.03	TOTAL

DAY	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DEC DAILY DISCHARGE (m^3/s)	DEC MEAN CONCENTRATION (mg/L)	DEC DAILY LOAD (t)	DAY
1	0.734	18	1.14	0.884	15 S	1.12	0.155 B	9	0.12	1
2	0.758	17	1.11	0.878	15	1.27	0.152 B	9	0.12	2
3	0.788	16	1.08	0.882	15	1.27	0.149 B	8	0.10	3
4	0.785	16	1.08	0.828	15	1.20	0.185 B	8	0.11	4
5	0.768	15	1.00	0.805	14	1.09	0.181 B	8	0.13	5
6	0.749	15 S	0.97	0.831	14	1.13	0.211 B	8	0.15	6
7	0.761	14	0.93	0.832 B	13	0.71	0.232 B	8	0.16	7
8	0.735	13	0.83	0.815 B	13	0.58	0.250 B	7	0.15	8
9	0.723	14	0.87	0.434 B	13	0.49	0.277 B	7 S	0.17	9
10	0.751	13	0.84	0.371 B	13	0.42	0.287 B	7	0.18	10
11	0.763	12	0.81	0.386 B	13	0.43	0.230 B	8	0.16	11
12	0.788	11	0.75	0.399 B	13	0.45	0.207 B	8	0.14	12
13	0.797	10	0.69	0.416 B	12	0.43	0.172 B	8	0.12	13
14	0.804	9 S	0.63	0.434 B	12	0.45	0.143 B	9	0.11	14
15	0.810	9	0.63	0.449 B	12	0.47	0.126 B	9	0.10	15
16	0.819	9	0.64	0.436 B	12	0.44	0.118 B	9	0.09	16
17	0.826	8	0.57	0.404 B	11	0.38	0.110 B	10	0.10	17
18	0.831	9 S	0.65	0.371 B	10	0.32	0.107 B	11	0.10	18
19	0.867	8	0.67	0.296 B	11	0.28	0.108 B	12	0.11	19
20	0.880	8	0.68	0.283 B	11	0.25	0.105 B	12	0.11	20
21	0.885	8	0.69	0.232 B	11	0.22	0.111 B	13	0.12	21
22	0.892	8	0.69	0.219 B	11	0.21	0.118 B	14	0.14	22
23	0.897	8	0.62	0.211 B	10	0.18	0.127 B	14	0.15	23
24	0.811	8	0.63	0.203 B	10	0.18	0.118 B	14	0.14	24
25	0.888	9	0.75	0.196 B	11	0.19	0.110 B	15	0.14	25
26	0.870	10	0.84	0.187 B	10	0.18	0.111 B	15	0.15	26
27	0.888	11	0.84	0.183 B	10	0.18	0.108 B	15	0.15	27
28	1.02	13	1.15	0.178 B	10	0.18	0.094 B	15	0.13	28
29	1.01	14	1.22	0.186 B	10	0.18	0.089 B	17	0.13	29
30	1.14	15 S	1.48	0.182 B	9	0.13	0.091 B	18	0.14	30
31	1.19	15	1.53				0.097 B	18	0.15	31
TOTAL	26.588		27.06	13.325		14.91	4.832		4.09	TOTAL

A - MANUAL GAUGE B - ICE CONDITIONS E - ESTIMATED S - SAMPLE(S) COLLECTED THIS DAY

MANITOBA

PEMBINA RIVER NEAR WINDYGATES - STATION NO. 05080007

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR	18 14:20	1.5	9.27	W	40.0		DH59	648		176														
MAR	19 14:10	0.5	12.9	W	40.0		DH59	600		169	24	27	46	66	76	86	94	99	100		12	61	27
MAR	20 18:00	0.5	19.1	W	40.0		DH59	836																
MAR	21 09:15	1.0	21.7	W	40.0		DH59	463																
MAR	21 18:45	1.0	21.7	W	40.0		DH59	1370		189	29	33	52	67	77	86	92	98	100		14	53	33
MAR	22 09:20	0.0	24.6	W	40.0		DH59	650																
MAR	22 18:00	1.5	24.4	W	40.0		DH59	1730		217	19	24	35	41	60	70	76	91	99	100	30	46	24
MAR	23 09:10	0.5	28.5		40.0		DH59	976																
MAR	23 14:00	1.5	27.8		40.0		DH59	980																
MAR	23 18:30	1.5	27.8		40.0		DH59	1130		186	22	31	47	57	73	84	88	97	100		16	53	31
MAR	24 08:45	1.0	27.8		40.0		DH59	818																
MAR	24 13:40	1.0	28.0		40.0		DH59	861																
MAR	24 18:45	1.5	29.4		40.0		DH59	855																
MAR	25 08:00	1.0	30.0		40.0		DH59	1060																
MAR	25 11:40	1.0	4.36		40.0	M	DH59	743		184	24	25	49	63	81	89	94	99	100		11	54	35
MAR	25 11:45	1.0	4.77		37.0	M	DH59	802		188	33	36	46	56	72	83	87	97	100		17	53	30
MAR	25 11:50	1.0	4.53		34.0	M	DH59	1020		186	16	23	31	42	64	84	85	93	99	100	16	61	23
MAR	25 11:55	1.0	4.98		31.0	M	DH59	891		193	30	25	39	47	65	75	80	93	99	100	25	50	25
MAR	25 12:00	1.0	7.09		28.0	M	DH59	718		211	25	37	54	63	82	91	97	100			9	54	37
MAR	25 18:50	2.0	28.0		40.0		DH59	894																
MAR	26 08:45	1.0	28.6		40.0		DH59	880																
MAR	26 12:45	1.0	27.8		40.0		DH59	672																
MAR	26 18:40	1.0	26.8		40.0		DH59	588																
MAR	27 09:40	1.0	23.0		40.0		DH59	474																
MAR	27 17:35	2.0	20.7		40.0		DH59	451																
MAR	28 09:00	0.0	20.6		40.0		DH59	441																
MAR	30 09:15	0.0	12.0		40.0		DH59	182																
MAR	30 17:15	0.0	12.5		40.0		DH59	325																
MAR	31 11:15	0.5	10.8		40.0		DH59	328																
MAR	31 17:20	2.0	13.0		40.0		DH59	350																
APR	01 11:30	3.0	1.26		42.0	M	DH59	336		311	25	35	62	75	85	91	97	100			9	53	38
APR	01 11:35	3.0	2.17		40.0	M	DH59	338		306	24	35	53	73	85	94	99	100			6	56	38
APR	01 11:40	3.0	2.96		38.0	M	DH59	360		318	30	35	53	77	85	90	95	99	150		10	54	36
APR	01 11:45	3.0	3.32		35.0	M	DH59	339		311	29	35	53	77	85	91	95	99	150		9	55	36
APR	01 11:50	3.0	2.67		31.0	M	DH59	328		314	21	42	61	78	89	93	96	99	100		7	51	42
APR	01 18:15	4.0	15.1	V	40.0		DH59	551																
APR	02 10:20	4.0	17.7		40.0		DH59	590		331	25	37	56	70	81	87	93	99	100		13	50	37
APR	02 18:45	5.0	20.5		40.0		DH59	1180		323	35	36	56	64	81	89	96	99	100		11	53	36
APR	03 08:30	3.0	23.3		40.0		DH59	831																
APR	03 18:45	3.5	25.7		40.0		DH59	987																
APR	04 09:45	2.0	29.4		40.0		DH59	893																
APR	04 18:30	3.0	32.2		40.0		DH59	1040																
APR	05 09:35	1.0	32.5		40.0		DH59	837																
APR	05 18:40	3.0	32.0		40.0		DH59	757		280														
APR	06 09:35	2.0	30.8		40.0		DH59	653																
APR	06 18:45	3.0	29.7		40.0		DH59	645																
APR	07 09:20	1.0	28.7		40.0		DH59	613																
APR	08 08:30	1.0	26.4	V	40.0		DH59	535																
APR	08 18:30	4.0	26.4	V	40.0		DH59	539																
APR	09 08:25	2.0	25.3	V	40.0		DH59	500																
APR	09 18:05	6.0	25.3	V	40.0		DH59	453																
APR	10 08:35	4.0	24.2	V	40.0		DH59	479																
APR	10 19:05	6.5	24.2	V	40.0		DH59	485		327	25	30	49	62	81	88	93	99	100		12	58	30
APR	11 08:25	4.0	22.2	V	40.0		DH59	459		289	27	33	54	61	73	80	86	95	100		20	47	33
APR	12 08:10	6.0	21.8		40.0		DH59	434																
APR	13 09:15	6.0	20.4		40.0		DH59	370																
APR	14 09:00	7.0	19.9		40.0		DH59	375	C															
APR	15 08:10	8.0	18.5		40.0		DH59	429																
APR	15 08:30	7.0	17.7		40.0		DH59	362																
APR	16 14:50	9.0	4.43		30.0	M	DH59	298		147														
APR	16 14:55	9.0	3.87		34.0	M	DH59	328		192														
APR	16 15:00	9.0	3.73		37.0	M	DH59	348		189														
APR	16 15:05	9.0	3.35		40.0	M	DH59	328		314														
APR	16 15:10	9.0	2.02		42.0	M	DH59	313		310														
APR	16 08:30	8.0	16.6		40.0		DH59	291																
APR	19 09:20	10.0	15.8		40.0		DH59	313	C															
APR	20 10:00	9.0	15.7		40.0		DH59	282	C															
APR	21 11:45	10.5	14.8		40.0		DH59	275	C															
APR	22 08:30	8.0	14.3		40.0		DH59	255	C															
APR	23 09:25	10.0	13.8		40.0		DH59	240	C															
APR	25 08:50	9.0	12.9		40.0		DH59	240	C	345														
APR	26 19:00	10.0	12.3		40.0		DH59	486	A															
APR	28 09:25	10.5	11.4		40.0		DH59	324	A															
MAY	05 09:55	14.0	7.76		40.0		DH59	115	C	388														
MAY	07 11:20	13.0	0.990		32.0	M	DH48	92		386														
MAY	07 11:25	13.0	1.80		35.5	M	DH48	88		378														
MAY	07 11:30	13.0	1.59		38.0	M	DH48	102		380														
MAY	07 11:35	13.0	1.79		40.0	M	DH48	94		380														
MAY	07 11:40	13.0	1.23		42.0	M	DH48	86		385														
MAY	12 14:20	10.0	5.40		40.0		DH59	127	C															
MAY	14 14:50	12.0	6.11		40.0		DH59	88	C	440														
MAY	19 16:30	17.0	4.71		40.0		DH59	38																
MAY	26 13:20	17.0	3.37		40.0		DH59	29		494														
MAY	28 08:20	15.0	3.24		40.0		DH59	33																
MAY	30 19:00	16.0	3.07		40.0		DH59	24																
JUN	02 19:30	17.0	2.86		40.0		DH59	22		506														
JUN	09 08:30	14.0	2.30		40.0		DH59	17																
JUN	13 10:00	18.0	0.332		9.0	I	DH48	11		536														
JUN	13 10:05	16.0	0.358		7.5	I	DH48	11		536														
JUN	13 10:10	16.0	0.508		6.0	I	DH48	10		536														
JUN	13 10:15	16.0	0.681		4.5	I	DH48	12		529														
JUN	13 10:20	16.0	0.322		3.0	I	DH48	11		535														
JUN	13 10:25	16.0	2.47		40.0		DH48	12		535														
JUN	16 10:40	17.0	2.36		40.0		DH48	11																
JUN	23 10:20	16.0	2.07		40.0		DH48	8		550														
JUN	25 18:45	15.0	2.41		40.0		DH48	41																
JUN	30 08:45	15.0	3.54		40.0		DH48	43		527														
JUL	02 08:40	18.0	3.73		40.0		DH48	30																
JUL	06 15:10	28.0	2.42	V	40.0		DH48	23		545														
JUL	12 20:00	26.0	1.59	V	40.0		DH48	8		580														
JUL	16 19:15	25.0	0.908	V	40.0		DH48	6		571														
JUL	24 11:45	15.0	0.475	V	40.0		DH48	7																
JUL	25 08:45	16.0	0.426		40.0		DH48	10		587														

NOTE SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1985

DISCHARGE SYMBOL(S) V - DAILY MEAN, MANUAL GAUGE W - DAILY MEAN, ICE CONDITIONS Y - DAILY MEAN, ESTIMATED
CONCENTRATION SYMBOL(S) C - COARSE MATERIAL PRESENT A - CLASSIFIED AS AN ANOMALY
VERTICAL SYMBOL(S) M - A SEDIMENT MEASUREMENT VERTICAL
I - A SEDIMENT MEASUREMENT VERTICAL NOT AT THE REGULAR MEASUREMENT CROSS-SECTION

CONTINUED

PEMBINA RIVER NEAR WINDYGATES - STATION NO. 05OB007 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP (°C)	INSTANT. DISCHARGE (m³/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
JUL 26	10:25	18.0	0.226	40.0	DH48	7															
AUG 04	10:50	21.0	0.138	40.0	DH48	8	596														
AUG 11	09:00	18.0	0.105	40.0	DH48	8															
AUG 17	10:00	13.0	1.87	40.0	DH48	598	418	39	64	84	93	99	99	99	99	100			1	35	64
AUG 20	10:20	15.0	0.131	2.0 2	DH48	39	563														
AUG 20	10:32	18.0	0.218	4.5 2	DH48	40	554														
AUG 20	10:34	15.0	0.218	7.0 2	DH48	40	551														
AUG 20	10:36	15.0	0.181	8.5 2	DH48	40	547														
AUG 20	10:38	15.0	0.256	10.0 2	DH48	40	547														
AUG 22	16:00	21.0	0.877	40.0	DH48	43															
SEP 02	08:35	15.0	0.577	40.0	DH48	21	581														
SEP 15	11:30	14.0	0.726	40.0	DH48	9	558														
SEP 16	08:40	15.0	0.743	40.0	DH48	12															
SEP 23	09:05	7.0	0.697	40.0	DH48	8	570														
SEP 29	09:10	5.0	0.757	40.0	DH48	15	558														
OCT 06	09:50	5.0	0.756	40.0	DH48	14	574														
OCT 14	10:30	3.0	0.619	40.0	DH48	9	589														
OCT 18	11:20	4.0	0.894	40.0	DH48	9															
OCT 30	11:50	4.0	1.15	40.0	DH48	15	604														
NOV 01	16:00	0.4	0.737	40.0	DH48	15															
DEC 09	13:00	0.5	0.377 W	40.0	DIP	7	703														

NOTE - SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1985

DISCHARGE SYMBOL(S) W - DAILY MEAN, ICE CONDITIONS
VERTICAL SYMBOL(S) 2 - A SEDIMENT MEASUREMENT VERTICAL NOT AT THE REGULAR MEASUREMENT CROSS-SECTION

PEMBINA RIVER NEAR WINDYGATES - STATION NO. 05OB007

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLES	CONCENTRATION MAXIMUM (mg/L)		CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY : JAN-DEC MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1962	---PCCCCCCCC	MANUAL	1	630	APR 30	8	JUN 29	5 590	APR 21	30 400	---	---	---
1963	CCCCCCCCCCCC	MANUAL		530	JUN 07	0	JAN 29 *	289	JUN 06	8 480	33.2	33.2	---
1964	CCCCCCCCCCCC	MANUAL		595	APR 21	12	JUL 12	378	APR 21	12 400	34.0	28.6	16.9
1965	CCCCCCCCCCCC	MANUAL	1	580	MAY 05	5	AUG 12	5 300	APR 14	57 600	158	71.7	60.3
1966	CCCCCCCCCCCC	MANUAL	1	730	APR 01	11	NOV 21	6 470	APR 01	86 400	237	113	45.5
1967	CCCCCCCCCCCC	MANUAL	5	800	APR 20 *	0	OCT 02	13 800	APR 20	85 800	235	137	34.1
1968	CCCCCCCCCCCC	MANUAL	1	670	MAR 28	20	JUL 10	1 880	MAR 28	23 200	63.5	125	32.1
1969	CCCCCCCCCCCC	MANUAL	1	230	APR 12	8	JAN 09	6 770	APR 19	144 000	395	184	31.3
1970	CCCCCCCCCCCC	MANUAL	2	630	APR 26	30	OCT 03	18 800	APR 26	178 000	488	204	29.5
1971	CCCCCCCCCCCC	MANUAL	1	430	APR 11	20	OCT 19	17 500	APR 11	180 000	437	230	25.7
1972	CCCCCCCCCCCC	MANUAL	1	570	APR 11	17	OCT 15	5 040	APR 11	103 000	282	235	22.6
1973	CCCCCCCCCCCC	MANUAL		388	JUL 26	24	SEP 18	73.4	AUG 09	2 590	7.11	215	24.3
1974	CCCCCCCCCCCC	MANUAL	3	670	APR 16	25	AUG 15	26 300	MAY 21 *	393 000 *	1 080	267	30.1
1975	CCCCCCCCCCCC	MANUAL	1	180	MAY 01	10	FEB 25	3 480	MAY 12	90 800	248	284	28.0
1976	CCCCCCCCCCCC	MANUAL	3	330	APR 05	20	AUG 03	12 400	APR 06	259 000	709	320	25.7
1977	CCCCCCCCCCCC	MANUAL	1	310	MAY 19	13	APR 17	274	MAY 22	1 460	4.00	299	26.8
1978	CCCCCCCCCCCC	MANUAL	2	110	APR 06	5	MAR 29	4 240	APR 09	41 500	114	267	26.1
1979	CCCCCCCCCCCC	MANUAL	2	660	APR 21	15	AUG 12	20 300	APR 22	352 000	965	327	24.8
1980	CCCCCCCCCCCC	MANUAL	1	290	MAY 29	13	JAN 16	385	MAY 25	2 330	8.11	309	25.4
1981	CCCCCCCCCCCC	MANUAL	3	180	MAY 23	5	NOV 15	1 530	MAY 23	4 370	12.0	294	25.8
1982	CCCCCCCCCCCC	MANUAL	4	850	JUN 07	8	SEP 15	12 600	JUN 07	53 100	148	286	25.3
1983	CCCCCCCCCCCC	MANUAL	1	610	APR 04	4	AUG 07	3 990	APR 04	46 400	127	279	24.8
1984	CCCCCCCCCCCC	MANUAL		891	JUN 15	3	NOV 07	739	JUN 15	1 760	4.81	266	25.2
1985	CCCCCCCCCCCC	MANUAL	1	730	MAR 22	7	JUL 24	2 820	MAR 23	44 700	123	280	24.8

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

MANITOBA

RED RIVER AT EMERSON - STATION NO. 05OC001

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 49 00 30 N LONG 97 12 40 W
DRAINAGE AREA: 104 000 km²
TYPE OF FLOW: REGULATED
TYPE OF GAUGE: RECORDING

INTERNATIONAL GAUGING STATION

TOTAL SUSPENDED SEDIMENT LOAD 1 210 000 TONNES FOR THE PERIOD JAN 01 TO DEC 31

REMARKS:

DAY	JAN DAILY DISCHARGE (m³/s)	JAN MEAN CONCENTRATION (mg/L)	JAN DAILY LOAD (t)	FEB DAILY DISCHARGE (m³/s)	FEB MEAN CONCENTRATION (mg/L)	FEB DAILY LOAD (t)	MAR DAILY DISCHARGE (m³/s)	MAR MEAN CONCENTRATION (mg/L)	MAR DAILY LOAD (t)	DAY
1	36.9 B	12	36.3	32.4 B	12	33.6	35.0 B	12	36.3	1
2	36.6 B	12	37.9	32.4 B	12	33.6	35.3 B	10	30.5	2
3	36.3 B	12	37.6	32.3 B	12	33.5	35.6 B	10	30.7	3
4	36.0 B	12	37.3	32.2 B	12	33.4	35.8 B	10	30.9	4
5	36.7 B	11	33.9	32.1 B	13	36.1	36.2 B	8	25.0	5
6	35.4 B	11	33.8	32.0 B	13 S	35.9	36.6 B	9	28.7	6
7	35.1 B	11	33.4	32.2 B	13	36.2	37.6 B	11	35.9	7
8	34.8 B	11 S	33.1	32.1 B	13	36.1	38.6 B	12	38.9	8
9	34.7 B	11	33.0	32.1 B	13	36.1	39.0 B	11	37.1	9
10	34.8 B	11	33.9	32.1 B	13	36.1	38.8 B	11	37.0	10
11	34.5 B	11	32.8	32.2 B	13	36.2	38.2 B	10	33.0	11
12	34.4 B	11	32.7	32.2 B	13	36.2	38.7 B	13	43.5	12
13	34.3 B	11	32.6	32.3 B	12	33.5	41.7 B	23	82.9	13
14	34.2 B	11	32.5	32.4 B	12	33.6	44.4 B	34	130	14
15	34.1 B	11	32.4	32.6 B	12	33.6	47.0 B	37	180	15
16	34.0 B	11	32.3	32.5 B	12	33.7	53.2 B	38	175	16
17	33.9 B	11	32.2	32.6 B	12	33.7	70.9 B	46	282	17
18	33.8 B	11	32.1	32.7 B	12	33.8	108 B	64	597	18
19	33.7 B	12	34.9	32.8 B	12	34.0	157 B	80	1 090	19
20	33.6 B	12	34.8	32.7 B	12	33.8	214 B	101	1 870	20
21	33.5 B	12	34.7	32.7 B	12	33.9	273 B	128	3 040	21
22	33.4 B	12	34.6	32.6 B	11	31.2	314 B	183 S	5 240	22
23	33.3 B	12	34.5	32.8 B	11	31.3	347 B	236	7 080	23
24	33.2 B	12	34.4	33.0 B	11	31.4	378 B	247 S	8 000	24
25	33.1 B	12	34.3	33.4 B	11	31.7	407 B	257	8 040	25
26	33.0 B	12	34.2	33.8 B	11	32.2	437 B	270	10 200	26
27	32.9 B	12	34.1	34.3 B	11 S	32.6	462 B	301 S	12 000	27
28	32.8 B	12	34.0	34.7 B	11	33.0	488 B	332	13 500	28
29	32.7 B	12	33.9				472 B	340	13 900	29
30	32.6 B	12	33.8				459 B	274	11 100	30
31	32.5 B	12	33.7				483 B	208	8 240	31
TOTAL	1 059.6		1 058.5	914.5		950.4	5 870.0		108 135.4	TOTAL

DAY	APR DAILY DISCHARGE (m³/s)	APR MEAN CONCENTRATION (mg/L)	APR DAILY LOAD (t)	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	DAY
1	458 B	196	7 840	143	847	10 500	203	118	2 070	1
2	424 B	217	7 950	140	705	8 530	208	122	2 170	2
3	373	236 S	7 700	136	567	6 880	224	148	2 830	3
4	328	243	6 910	133	461	5 180	280	172	3 880	4
5	304	271	7 120	131	346	3 920	300	200	5 180	5
6	282	337 S	8 210	128	266 S	2 940	328	249	7 010	6
7	263	397	9 020	124	338	3 620	336	328	9 520	7
8	248	452 S	9 610	121	530 S	5 640	341	372	11 000	8
9	228	472	9 300	119	534	5 490	338	351	10 300	9
10	210	488	8 510	118	468 S	4 490	333	318	9 090	10
11	195	436	7 360	118	437	4 480	317	289	7 920	11
12	181	384	6 180	124	444	4 760	292	288	6 760	12
13	178	348	5 280	140	439 S	5 190	259	246	5 500	13
14	181	388 S	6 710	185	382 S	6 110	228	232	4 530	14
15	185	488	7 480	266	398 S	9 150	201	223	3 870	15
16	187	574 S	9 270	330	681 S	24 800	183	210	3 320	16
17	183	578	9 110	372	1 680 S	54 000	170	205	3 010	17
18	178	462	8 990	403	1 180 S	40 400	180	202	3 790	18
19	183	380	6 930	428	713	26 400	184	191	3 540	19
20	183	228 S	3 610	449	478 S	18 500	149	181	2 330	20
21	148	159	2 010	480	387	15 400	147	180	2 280	21
22	140	123	1 490	487	366 S	14 800	148	177	2 230	22
23	135	125	1 480	459	338	13 300	143	178	2 170	23
24	131	278	3 180	438	294	11 200	141	201	2 450	24
25	128	537 S	5 940	410	255	9 030	148	270	3 410	25
26	130	840	7 190	383	210	6 700	153	350 S	4 630	26
27	136	723	8 500	325	186 S	4 880	164	339	4 920	27
28	142	800	9 820	283	167 S	4 080	192	310	5 140	28
29	145	878	11 000	251	159	3 450	233	273	5 500	29
30	145	919 S	11 800	227	149	2 920	292	248	6 180	30
31				211	134	2 440				31
TOTAL	6 273		209 800	8 007		338 320	6 740		144 520	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

RED RIVER AT EMERSON - STATION NO. 05OC001

SUSPENDED SEDIMENT FOR 1985

DAY	JUL DAILY DISCHARGE (m^3/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m^3/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	DAY
1	338	217	6 360	186	387 S	6 220	198	183 S	2 790	1
2	385	197	6 210	183	350 S	5 530	193	169 S	2 870	2
3	380	187 S	6 140	175	378	5 720	183	182 S	2 580	3
4	381	176 S	5 860	171	351 S	5 180	198	188 S	2 700	4
5	385	175 S	5 520	166	313 S	4 490	217	201 S	3 770	5
6	340	153 S	4 490	173	308 S	4 570	226	182 S	3 590	6
7	306	103	2 720	181	323 S	5 050	229	185 S	3 280	7
8	269	104 S	2 420	174	376 S	4 180	225	181 S	3 130	8
9	234	237 S	4 790	163	277 S	3 900	214	157 S	2 900	9
10	206	270 S	4 850	159	267	3 670	202	148 S	2 580	10
11	190	278 S	4 560	155	282	3 510	187	141 S	2 280	11
12	178	275 S	4 230	152	280 S	3 410	174	146 S	2 180	12
13	167	285	3 840	149	259 S	3 330	168	159 S	2 260	13
14	159	286 S	4 080	145	248 S	3 120	159	145 S	1 990	14
15	151	311	4 060	143	224	2 770	155	136 S	1 890	15
15	146	318	3 980	140	210	2 540	149	136 S	1 780	16
17	142	297 S	3 640	142	218	2 640	142	137 S	1 680	17
18	137	285	3 140	148	277	3 480	133	165 S	1 780	18
19	136	238 S	2 800	180	513 S	7 050	128	179 S	1 950	19
20	136	223 S	2 620	207	698 S	10 700	124	172 S	1 840	20
21	136	231	2 750	256	503	11 100	123	182 S	2 040	21
22	140	260 S	3 140	287	441	10 900	138	173 S	1 880	22
23	143	290 S	3 580	314	403	10 900	134	182 S	2 110	23
24	147	274 S	3 480	335	382 S	11 100	143	200 S	2 680	24
25	152	285 S	3 480	337	395 S	8 590	159	188 S	2 730	25
26	154	277	3 690	321	226 S	6 270	159	181 S	2 630	26
27	159	295 S	4 050	303	173 S	4 530	150	178 S	2 310	27
28	167	305 S	4 420	288	156 S	3 930	138	181 S	1 830	28
29	175	307 S	4 640	271	158 S	3 720	128	134 S	1 530	29
30	182	435 S	6 840	245	182 S	3 850	120	116 S	1 200	30
31	188	461	7 370	220	170 S	3 230				31
TOTAL	6 471		133 770	6 447		169 210	4 977		70 430	TOTAL

DAY	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DEC DAILY DISCHARGE (m^3/s)	DEC MEAN CONCENTRATION (mg/L)	DEC DAILY LOAD (t)	DAY
1	118	103 S	1 030	117	51 S	518	59.2 B	14	71.6	1
2	114	86 S	887	116	47 S	471	60.0 B	14	72.8	2
3	111	81 S	777	113	41 S	397	60.7 B	13	68.2	3
4	108	83 S	782	110	36 S	342	61.5 B	12	63.8	4
5	107	99 S	915	107	42 S	388	61.5 B	11 S	58.4	5
6	105	91 S	828	105	45 S	408	62.3 B	11	59.2	6
7	103	80 S	712	103	43 S	383	62.4 B	11	59.3	7
8	103	87 S	863	101	47 S	410	62.2 B	11	59.1	8
9	101	109 S	951	96.8	40 S	334	61.7 B	11	58.6	9
10	98.5	95 S	808	95.4	27 S	223	61.0 B	11	58.0	10
11	97.8	80 S	677	85.8	27	198	60.3 B	11	57.3	11
13	105	78 S	680	71.2	27	166	59.7 B	11	56.7	12
13	127	88 S	966	71.7 B	28	181	59.5 B	10	51.4	13
14	153	113 S	1 480	74.3 B	28	187	59.4 B	10	51.3	14
15	187	126 S	1 950	67.5 B	28 S	152	59.6 B	11	56.6	15
15	171	110 S	1 630	62.7 B	25	135	58.8 B	10	51.7	16
17	168	84 S	1 230	61.7 B	25	133	60.1 B	10	51.8	17
18	161	71 S	988	63.8 B	24	132	60.2 B	11	57.2	18
19	156	66 S	890	70.9 B	23	141	60.0 B	11	57.0	19
20	151	63 S	822	68.4 B	22	132	59.8 B	11	56.8	20
21	145	82 S	777	67.0 B	21	122	59.4 B	11	56.5	21
23	141	85 S	782	67.4 B	21	123	56.9 B	11	56.0	22
23	138	73 S	670	67.6 B	20	117	56.7 B	12	60.9	23
24	136	75 S	661	68.3 B	20	118	56.4 B	12	60.5	24
25	136	89 S	905	63.5 B	20	110	56.0 B	11	55.1	25
26	133	88 S	788	61.0 B	18	100	57.5 B	10	48.7	26
27	132	84 S	730	57.8 B	18	89.9	56.5 B	10	48.2	27
28	129	87 S	635	58.9 B	17	83.5	56.3 B	10	48.6	28
29	126	81 S	859	57.8 B	18	79.9	55.8 B	10	48.2	29
30	122	84 S	878	58.4 B	18	75.7	55.5 B	10	48.0	30
31	118	58 S	591				58.2 B	11	52.5	31
TOTAL	3 978.4		27 907	2 385.2		6 405.1	1 841.6		1 781.9	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

MANITOBA

RED RIVER AT EMERSON - STATION NO. 05OC001

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)		SINGLE VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)		PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		PERCENT SAND	SILT	CLAY
JAN 08	14:00	0.5	34.8	B	20.0	X	DH48	11		473																
FEB 06	12:45	0.5	32.0	B	37.0	X	DH48	13		363																
FEB 27	12:00	0.5	34.2	B	MID	X	DH48	11		339																
MAR 22	10:00	0.5	312	B	131		DH59	184		309																
MAR 22	12:30	0.5	76.1	B	104	M	D49	208		307																
MAR 22	12:35	0.5	83.4	B	116	M	D49	191		305																
MAR 22	12:40	0.5	88.2	B	131	M	D49	177		303																
MAR 22	12:45	0.5	86.1	B	143	M	D49	184		301																
MAR 22	12:50	0.5	80.6	B	157	M	D49	228		308																
MAR 24	18:00	1.0	375	W	131		DH59	284																		
MAR 24	18:01	1.0	375	W	131		DH59	210																		
MAR 24	18:02	1.0	375	W	131		DH59	204																		
MAR 24	18:03	1.0	375	W	131		DH59	218																		
MAR 27	11:15	0.5	482	W	136		DH59	273		269																
APR 03	12:40	1.0	80.4		155	M	D49	239																		
APR 03	12:45	1.0	77.2		143	M	D49	238																		
APR 03	12:50	1.0	87.0		131	M	D49	241		312																
APR 03	12:55	1.0	82.3		119	M	D49	234																		
APR 03	13:00	1.0	102		102	M	D49	248																		
APR 06	09:00	3.0	282	H	131		DH59	99	A																	
APR 06	09:01	3.0	282	H	131		DH59	327																		
APR 06	10:50	3.0	246	H	131		DH59	480		341	45	51	77	88	94	98	100					2	47	51
APR 08	11:00	3.0	72.7		105	M	D48	458		338	38	52	72	88	95	97	100					3	45	52
APR 08	11:05	3.0	52.6		122	M	D48	447		331	37	50	72	84	97	97	98	100				3	47	50
APR 08	11:10	3.0	39.4		131	M	D48	446		334	36	51	72	89	95	98	100					2	47	51
APR 08	11:15	3.0	54.1		143	M	D48	455		332	39	50	74	87	95	97	98	100				3	47	50
APR 08	11:20	3.0	26.4		157	M	D48	450		351	34	52	71	85	95	98	99	100				2	46	52
APR 14	18:00	9.0	181	H	131		DH59	381																		
APR 14	18:01	9.0	181	H	131		DH59	384																		
APR 14	18:02	9.0	181	H	131		DH59	417																		
APR 16	10:30	8.0	48.3		107	M	DH59	598		381																
APR 16	10:35	8.0	40.4		122	M	DH59	565		342																
APR 16	10:40	8.0	24.4		131	M	DH59	560		348																
APR 16	10:45	8.0	42.8		142	M	DH59	561		338																
APR 16	10:50	8.0	19.8		157	M	DH59	572																		
APR 20	12:00	13.0	153	H	131		DH59	219		428																
APR 25	12:00	13.0	128	H	131		DH59	841																		
APR 30	12:00	14.0	145	H	131		DH59	904		429																
MAY 06	11:15	14.0	36.4		107	M	DH59	288		422																
MAY 06	11:20	14.0	27.6		122	M	DH59	288		426																
MAY 06	11:25	14.0	19.5		131	M	DH59	288		423																
MAY 06	11:30	14.0	30.0		143	M	DH59	283		417																
MAY 06	11:35	14.0	11.2		155	M	DH59	285		432																
MAY 08	12:00E	16.0	121	H	131		DH59	590		395	36	52	77	86	96	99	100					1	37	62
MAY 10	12:00E	16.0	116	H	131		DH59	449																		
MAY 13	20:00	16.0	140	H	131		DH59	424		388																
MAY 14	20:00	16.0	185	H	131		DH59	311																		
MAY 15	18:00	16.0	285	H	131		DH59	443																		
MAY 16	18:00	16.0	330	H	131		DH59	377																		
MAY 17	11:15	16.0	104		105	M	DH59	1930		209	17	52	87	93	98	99	100					1	47	52
MAY 17	11:20	16.0	80.8		122	M	DH59	1850		194	16	39	86	94	98	98	98	99	100			2	53	38
MAY 17	11:25	16.0	84.2		131	M	DH59	1860		206	21	59	85	93	99	99	99	100				1	40	59
MAY 17	11:30	16.0	69.8		140	M	DH59	1870		219	18	59	84	94	98	99	100					1	40	59
MAY 17	11:35	16.0	74.9		149	M	DH59	1870		211	33	68	83	95	98	99	99	100				1	31	68
MAY 18	18:00	16.0	403	H	131		DH59	255	A																	
MAY 20	21:00	16.0	448	H	131		DH59	305	A	311																
MAY 20	22:00	16.0	448	H	131		DH59	418																		
MAY 22	11:15	17.0	134		105	M	DH59	382		302	46	71	86	94	97	98	99	100				2	27	71
MAY 22	11:20	17.0	98.1		122	M	DH59	380		310	37	37	99	100								0	63	37
MAY 22	11:25	17.0	71.5		131	M	DH59	359		301	43	64	82	91	95	97	97	100				3	33	64
MAY 22	11:30	17.0	72.5		140	M	DH59	388		303	48	65	84	93	97	98	99	100				2	33	65
MAY 22	11:35	17.0	83.5		149	M	DH59	407		311	48	67	83	92	95	97	98	100				3	30	67
MAY 27	09:00	17.0	326	H	131		DH59	187		458																
MAY 28	10:00	17.0	70.0		101	M	D49	178		462																
MAY 28	10:05	17.0	86.1		119	M	D49	173		485																
MAY 28	10:10	17.0	91.4		131	M	D49	171		461																
MAY 28	10:15	17.0	80.5		140	M	D49	170		450																
JUN 25	09:30	18.0	38.4		107	M	DH59	348		431																
JUN 25	09:35	18.0	28.3		122	M	DH59	363		430																
JUN 25	09:40	18.0	28.1		131	M	DH59	377		430																
JUN 25	09:45	18.0	29.5		143	M	DH59	382		432																
JUN 25	09:50	18.0	20.0		155	M	DH59	349		420																
JUL 03	12:00E	22.0	380	H	131		DH59	187																		
JUL 04	12:00E	21.0	381	H	131		DH59	180																		
JUL 05	11:00	21.0	388	H	131		DH59	224	A																	
JUL 05	11:35	22.0	71.4		84.0	M	D49	184		323																
JUL 05	11:40	22.0	83.6		116	M	D49	184		318																
JUL 05	11:45	22.0	78.1		131	M	D49	180		318																
JUL 05	11:50	22.0	72.3		140	M	D49	188		300																
JUL 05	11:55	22.0	63.7		157	M	D49	180		295																
JUL 08	19:30	24.0	340	H	131		DH59	140																		
JUL 08	21:00	24.0	289	H	131		DH59	140																		
JUL 09	12:00	24.0	234	H	131		DH59	245																		
JUL 10	21:30	23.0	208	H	131		DH59	287																		
JUL 11	21:30	23.0	190	H	131		DH59	283																		
JUL 12	21:00	24.0	178	H	131		DH59	282		387																
JUL 14	09:00	23.0	159	H	131		DH59	296																		
JUL 17	21:00	23.0	142	H	131		DH59	284																		
JUL 18	09:00	22.0	136	H	131		DH59	240		383																
JUL 20	21:20	23.0	136	H	131		DH59	228																		
JUL 22	21:20	23.0	140	H	131		DH59	286																		
JUL 23	21:30	23.0	143	H	131		DH59	286																		
JUL 24	21:15	22.0	147	H	131		DH59	263																		
JUL 25	21:00	22.0	152	H	131		DH59	266																		
JUL 27	21:00	23.0	159	H	131		DH59	303		325																
JUL 28	09:50	23.0	187	H	131		DH59	307																		
JUL 29	18:30	22.0	175	H	131		DH59	306																		
JUL 30	18:30	22.0	183	H	131		DH59	489																		
AUG 01	20:30	23.0	186	H	131		DH59	380																		
AUG 02	21:00	23.0	183	H	131		DH59	365																		
AUG 04	21:15	22.0	171	H	131		DH59	339																		
AUG 05	20:00	23.0	166	H	131		DH59	291		307																
AUG 06	20:30	22.0	173	H	131		DH59	355																		

NOTE : SINGLE VERTICAL LOCATED AT 131 METRES FOR 1985

TIME SYMBOL: E - ESTIMATED

DISCHARGE SYMBOL(S): B - ICE CONDITIONS H - DAILY MEAN W - DAILY MEAN; ICE CONDITIONS

CONCENTRATION SYMBOL(S): A - CLASSIFIED AS AN ANOMALY

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL M - A SEDIMENT MEASUREMENT VERTICAL

CONTINUED

RED RIVER AT EMERSON - STATION NO. 05OC001 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
AUG 07	13:00	22.0	43.8		100	M	DH59	302		287														
AUG 07	13:05	22.0	39.2		120	M	DH59	318		293														
AUG 07	13:10	22.0	41.3		132	M	DH59	311		287														
AUG 07	13:15	22.0	38.0		144	M	DH59	309		298														
AUG 07	13:20	22.0	21.2		180	M	DH59	337		295														
AUG 07	19:45	22.0	181	H	131		DH59	288																
AUG 08	20:30	23.0	174	H	131		DH59	283																
AUG 09	09:30	21.0	183	H	131		DH59	277																
AUG 12	19:00	20.0	152	H	131		DH59	267																
AUG 13	19:00	19.0	149	H	131		DH59	260																
AUG 14	21:00	19.0	145	H	131		DH59	239																
AUG 19	19:30	17.0	196	H	131		DH59	590		308	47	65	79	87	94	97	99	100			3	32	65
AUG 20	19:30	17.0	207	H	131		DH59	554																
AUG 24	19:30	18.0	335	H	131		DH59	351																
AUG 25	09:00	17.0	337	H	131		DH59	288																
AUG 26	20:00	18.0	321	H	131		DH59	195																
AUG 27	09:30	18.0	74.0		88	O M	D49	171		301														
AUG 27	09:35	18.0	87.1		120	M	D49	173		300														
AUG 27	09:40	18.0	89.8		132	M	D49	188		308														
AUG 27	09:45	18.0	80.2		144	M	D49	169		305														
AUG 27	09:50	18.0	80.7		156	M	D49	170		300														
AUG 27	20:15	19.0	303	H	131		DH59	158																
AUG 28	21:00	17.0	288	H	131		DH59	148																
AUG 29	20:00	18.0	271	H	131		DH59	155																
AUG 30	19:00	19.0	245	H	131		DH59	180																
AUG 31	09:00	16.0	220	H	131		DH59	188																
SEP 01	09:00	16.0	198	H	131		DH59	159																
SEP 02	09:00	17.0	183	H	131		DH59	189																
SEP 03	17:00	17.0	183	H	131		DH59	159																
SEP 04	08:00	17.0	198	H	131		DH59	148		342														
SEP 05	08:00	16.0	217	H	131		DH59	201																
SEP 06	08:00	17.0	228	H	131		DH59	187																
SEP 07	08:00	16.0	229	H	131		DH59	184																
SEP 08	08:00	16.0	225	H	131		DH59	180																
SEP 09	08:00E	16.0	214	H	131		DH59	158																
SEP 10	08:00	15.0	202	H	131		DH59	148																
SEP 11	08:00	15.0	187	H	131		DH59	141		344														
SEP 12	08:00	15.0	174	H	131		DH59	142																
SEP 13	08:00	16.0	166	H	131		DH59	159																
SEP 14	08:00	15.0	159	H	131		DH59	147																
SEP 15	08:00	15.0	155	H	131		DH59	138																
SEP 16	08:00	15.0	149	H	131		DH59	135																
SEP 17	08:00	16.0	142	H	131		DH59	134																
SEP 18	08:00	16.0	133	H	131		DH59	150		348														
SEP 19	20:00	16.0	126	H	131		DH59	184																
SEP 20	16:00	13.0	124	H	131		DH59	189	A															
SEP 21	16:00	13.0	123	H	131		DH59	192																
SEP 22	08:00	13.0	126	H	131		DH59	173																
SEP 23	08:00	12.0	134	H	131		DH59	178																
SEP 24	08:00	11.0	148	H	131		DH59	203																
SEP 24	10:00	10.0	36.1		104	M	DH59	201		327														
SEP 24	10:05	10.0	26.8		120	M	DH59	208		333														
SEP 24	10:10	10.0	33.5		132	M	DH59	201		332														
SEP 24	10:15	10.0	33.2		148	M	DH59	201		331														
SEP 24	10:20	10.0	12.8		180	M	DH59	198		330														
SEP 25	08:00	10.0	159	H	131		DH59	198																
SEP 26	08:00	10.0	158	H	131		DH59	182																
SEP 27	08:00	10.0	150	H	131		DH59	180																
SEP 28	08:00	9.0	138	H	131		DH59	164																
SEP 29	08:00	8.0	128	H	131		DH59	143																
SEP 30	08:00	8.0	120	H	131		DH59	119		369														
OCT 01	08:00	8.0	116	H	131		DH59	107																
OCT 02	08:00	8.0	114	H	131		DH59	89																
OCT 03	08:00	8.0	111	H	131		DH59	83																
OCT 04	08:00	8.0	108	H	131		DH59	74																
OCT 05	08:00	8.0	107	H	131		DH59	100																
OCT 06	08:00	7.0	105	H	131		DH59	85																
OCT 07	08:00	7.0	103	H	131		DH59	80		366														
OCT 08	14:00	5.0	103	H	131		DH59	100																
OCT 09	18:00	5.0	101	H	131		DH59	111																
OCT 10	08:00	5.0	98.5	H	131		DH59	99																
OCT 11	08:00	5.0	97.9	H	131		DH59	82																
OCT 12	08:00	6.0	106	H	131		DH59	72																
OCT 13	08:00	7.0	127	H	131		DH59	84																
OCT 14	08:00	7.0	153	H	131		DH59	109		353														
OCT 15	08:00	6.0	167	H	131		DH59	127																
OCT 16	08:00	5.0	171	H	131		DH59	113																
OCT 17	08:00	5.0	168	H	131		DH59	85																
OCT 18	08:00	5.0	161	H	131		DH59	72																
OCT 19	08:00	5.0	156	H	131		DH59	68																
OCT 20	08:00	6.0	151	H	131		DH59	62																
OCT 21	08:00	7.0	145	H	131		DH59	80		476														
OCT 22	08:00	8.0	141	H	131		DH59	84																
OCT 23	08:00	8.0	138	H	131		DH59	72																
OCT 23	11:30	9.0	28.0		100	M	DH59	77		494														
OCT 23	11:35	9.0	25.9		116	M	DH59	77		497														
OCT 23	11:40	9.0	36.3		132	M	DH59	75		483														
OCT 23	11:45	9.0	34.8		148	M	DH59	73		502														
OCT 23	11:50	8.0	9.72		184	M	DH59	73		500														
OCT 24	08:00	9.0	136	H	131		DH59	76																
OCT 25	08:00	9.0	135	H	131		DH59	70																
OCT 26	08:00	8.0	133	H	131		DH59	66																
OCT 27	08:00	8.0	132	H	131		DH59	65																
OCT 28	08:00	7.0	129	H	131		DH59	55																
OCT 29	08:00	7.0	125	H	131		DH59	65																
OCT 30	08:00	7.0	122	H	131		DH59	64																
OCT 31	08:00	7.0	118	H	131		DH59	59																
NOV 01	08:00	6.0	117	H	131		DH59	51																
NOV 02	08:00	6.0	116	H	131		DH59	48																
NOV 03	08:00	5.0	112	H	131		DH59	42																
NOV 04	08:00	5.0	110	H	131		DH59	36																
NOV 05	08:00	5.0	107	H	131		DH59	38																
NOV 06	08:00	5.0	105	H	131		DH59	46		408														

NOTE : SINGLE VERTICAL LOCATED AT 131 METRES FOR 1985

TIME SYMBOL: E - ESTIMATED
DISCHARGE SYMBOL(S): H - DAILY MEAN
CONCENTRATION SYMBOL(S): A - CLASSIFIED AS AN ANOMALY
VERTICAL SYMBOL(S): M - A SEDIMENT MEASUREMENT VERTICAL

CONTINUED

RED RIVER AT EMERSON - STATION NO. 05OC001 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
NOV 07	08:00	5.0	103	H	131		DH59	42															
NOV 08	08:00	5.0	101	H	131		DH59	47	408														
NOV 09	08:00	5.0	96.6	H	131		DH59	42															
NOV 10	08:00	5.0	95.4	H	131		DH59	26															
NOV 15	16:00	0.0	67.5	W	131		DH59	28	410														
DEC 05	12:30	0.5	9.62	B	11.0	2	DH59	9	416														
DEC 05	12:35	0.5	12.3	B	26.0	2	DH59	13	422														
DEC 05	12:40	0.5	11.8	B	35.0	2	DH59	11	428														
DEC 05	12:45	0.5	10.9	B	47.0	2	DH59	11	429														
DEC 05	12:50	0.5	10.8	B	63.0	2	DH59	9	439														

NOTE : SINGLE VERTICAL LOCATED AT 131 METRES FOR 1985

DISCHARGE SYMBOL(S): B - ICE CONDITIONS H - DAILY MEAN W - DAILY MEAN; ICE CONDITIONS
VERTICAL SYMBOL(S): 2 - A SEDIMENT MEASUREMENT VERTICAL NOT AT THE REGULAR MEASUREMENT CROSS-SECTION

RED RIVER AT EMERSON - STATION NO. 05OC001

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)			MINIMUM (mg/L)			SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)			TOTAL FOR PERIOD (TONNES)	SUMMARY : JAN-DEC MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1956	---PC-------	MANUAL	685	APR 21		265	MAY 10		39 300	APR 23		656 000	---	---	---
1961	---P--------	MANUAL	310	APR 18		130	APR 25		1 570	APR 18		7 910	---	---	---
1978	CCCCCCCCCCCC	MANUAL	733	JUL 17		19	FEB 06		55 100	APR 11	*	1 130 000	3 100	3 100	---
1979	CCCCCCCCCCCC	MANUAL	523	JUL 07		12	JAN 23		46 800	APR 26		1 600 000	* 4 120	3 810	14.1
1980	CCCCCCCCCCCC	MANUAL	859	APR 09		10	FEB 12		33 400	APR 09		388 000	1 010	2 760	33.4
1981	CCCCCCCCCCCC	MANUAL	1 550	MAY 30		9	JAN 16		22 000	JUL 03		372 000	1 020	2 310	33.7
1982	CCCCCCCCCCCC	MANUAL	961	JUN 09		9	JAN 05		33 200	APR 17		846 000	2 320	2 310	26.1
1983	CCCCCCCCCCCC	MANUAL	686	JUN 18		5	FEB 07	*	23 200	APR 09		762 000	2 080	2 280	21.6
1984	CCCCCCCCCCCC	MANUAL	851	JUN 12		10	JAN 05		32 700	JUN 13		732 000	2 000	2 240	18.7
1985	CCCCCCCCCCCC	MANUAL	1 930	MAY 17	*	9	DEC 05		54 000	MAY 17		1 210 000	3 310	2 370	18.3

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

RED RIVER NEAR LOCKPORT - STATION NO. 05OJ010

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 50 06 28 N LONG 96 55 54 W
DRAINAGE AREA: 287 000 km²
TYPE OF FLOW: REGULATED
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 1 530 000 TONNES FOR THE PERIOD JAN 01 TO DEC 31

REMARKS:

DAY	JAN DAILY DISCHARGE (m³/s)	JAN MEAN CONCENTRATION (mg/L)	JAN DAILY LOAD (t)	FEB DAILY DISCHARGE (m³/s)	FEB MEAN CONCENTRATION (mg/L)	FEB DAILY LOAD (t)	MAR DAILY DISCHARGE (m³/s)	MAR MEAN CONCENTRATION (mg/L)	MAR DAILY LOAD (t)	DAY
1	59.5 B	14	72.1	50.4 B	16	69.7	54.0 B	15	70.0	1
2	60.0 B	14	72.6	50.2 B	17	73.7	53.8 B	15	69.7	2
3	60.5 B	14	73.2	50.5 B	17	74.2	53.7 B	15	69.6	3
4	61.2 B	14	74.0	50.6 B	17	74.3	54.1 B	15	70.1	4
5	62.0 B	15	80.4	49.0 B	17	72.0	54.5 B	15	70.6	5
6	63.0 B	15	81.6	50.0 B	17	73.4	55.5 B	15 S	71.9	6
7	62.0 B	15	80.4	50.4 B	17	74.0	57.0 B	15	73.9	7
8	61.5 B	15 S	79.7	51.5 B	17	75.8	56.0 B	15	72.6	8
9	60.5 B	15	78.4	52.0 B	17	76.4	55.0 B	15	71.3	9
10	59.0 B	15	76.5	52.5 B	17	77.1	60.0 B	14	72.6	10
11	58.0 B	15	75.2	53.0 B	17	77.8	64.0 B	14	77.4	11
12	56.5 B	15	73.2	53.5 B	17	78.6	67.2 B	14	81.3	12
13	56.0 B	15	72.6	53.7 B	16	74.3	69.0 B	15	89.4	13
14	56.5 B	15	73.2	54.0 B	16	74.8	71.0 B	14	85.9	14
15	55.5 B	15	71.8	54.1 B	16	74.8	72.0 B	14	87.1	15
16	54.5 B	16	75.3	54.1 B	16	74.8	77.0 B	15	98.8	16
17	54.0 B	16	74.6	54.2 B	16	74.9	90.0 B	15	117	17
18	54.5 B	16	75.3	54.2 B	16	74.8	115 B	15	148	18
19	54.0 B	16	74.6	54.1 B	16	74.8	150 B	34	441	19
20	54.0 B	16	74.6	54.0 B	16	74.6	210 B	82	1 490	20
21	53.5 B	16	74.0	54.0 B	16	74.6	266 B	130	2 990	21
22	53.0 B	16	73.3	54.0 B	16	74.6	308 B	162	5 570	22
23	52.0 B	16	71.9	53.8 B	16	74.5	453 B	184	7 200	23
24	51.0 B	16	70.5	53.9 B	16	74.5	518 B	207	9 280	24
25	50.5 B	16	69.8	54.3 B	16	75.1	603 B	234	12 200	25
26	50.0 B	16	69.1	54.3 B	16	75.1	676 B	265	15 500	26
27	51.5 B	16	71.2	54.3 B	16	75.1	737 B	311	19 800	27
28	52.2 B	16	72.2	54.3 B	16	70.4	782 B	353	23 200	28
29	52.0 B	16	71.9				786 B	348	23 000	29
30	51.5 B	16 S	71.2				772 B	328	21 800	30
31	50.5 B	16	69.8				777 B	328	22 000	31
TOTAL	1 730.5		2 294.3	1 479.0		2 088.3	3 288.8		155 050.2	TOTAL

DAY	APR DAILY DISCHARGE (m³/s)	APR MEAN CONCENTRATION (mg/L)	APR DAILY LOAD (t)	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	DAY
1	805 B	340	23 600	284	67 S	1 530	415 E	134 S	4 800	1
2	854 B	380	26 600	269	68 S	1 520	400 E	150 S	5 180	2
3	869 B	378 S	28 500	261	75 S	1 630	385 E	163 S	5 580	3
4	860 B	387 S	27 300	258	82 S	1 380	383	151 S	5 130	4
5	812	357 S	25 000	260	84 S	1 440	400	159 S	5 500	5
6	698	316 S	19 100	281	74 S	1 670	409	216 S	7 630	6
7	628	316 S	17 100	264	86 S	1 450	430	259 S	9 620	7
8	581	393 S	19 000	251	82 S	1 340	449	342 S	13 300	8
9	507	388 S	17 000	244	86 S	1 320	480	371 S	14 700	9
10	495	383 S	16 400	231	50 S	998	485 E	431 S	17 300	10
11	518	427 S	19 100	223	47 S	908	487 E	449 S	18 100	11
12	489	824 S	26 400	228	51 S	1 000	436 A	366 S	13 800	12
13	427	532 S	19 800	232	57 S	1 140	415 E	408 S	14 800	13
14	420	416 S	15 100	235	57 S	1 180	395 E	378 S	12 900	14
15	416	368 S	13 900	248	56 S	1 200	372	287 S	8 580	15
16	410	395 S	14 000	251	84 S	1 810	345	253 S	7 840	16
17	389	378 S	13 000	400 E	177 S	6 120	321	203 S	5 630	17
18	382	338 S	11 200	440 E	413 S	15 700	301	151 S	3 930	18
19	382	327 S	10 200	470 E	824 S	25 300	283	130 S	3 180	19
20	340	377 S	11 100	487	1 510 S	64 800	289	100 S	3 320	20
21	317	327 S	8 980	524	1 160 S	52 600	269	112 S	2 610	21
22	309	278 S	7 450	548	828 S	39 200	250	88 S	2 140	22
23	301	265 S	6 850	563	649 S	31 600	243	100 S	2 100	23
24	292	234 S	5 900	578	545 S	27 200	238	104 S	2 140	24
25	283	159 S	3 890	578	462 S	22 800	235	86 S	1 990	25
26	274	100 S	2 370	574	374 S	18 500	232	85 S	1 700	26
27	268	84 S	1 950	565	347 S	16 600	231	89 S	1 780	27
28	264	89 S	2 030	535	338 S	15 200	237	88 S	1 800	28
29	267	99 S	2 280	508	316 S	13 900	248	84 S	1 840	29
30	267	95 S	2 190	471	272 S	11 100	272	107 S	2 510	30
31				444	149 S	5 720				31
TOTAL	14 094		417 110	11 876		387 234	10 265		189 810	TOTAL

A - MANUAL GAUGE B - ICE CONDITIONS E - ESTIMATED S - SAMPLE(S) COLLECTED THIS DAY

MANITOBA

RED RIVER NEAR LOCKPORT - STATION NO. 05OJ010

SUSPENDED SEDIMENT FOR 1985

DAY	JUL DAILY DISCHARGE (m^3/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m^3/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	DAY
1	308	194 S	5 180	206	61 S	1 090	326	140 S	3 840	1
2	355	261 S	8 010	207	60 S	1 070	300	99 S	2 570	2
3	405 E	310 S	10 800	210	62 S	1 120	278	112 S	2 700	3
4	415	264 S	9 480	212	67 S	1 230	263	103 S	2 340	4
5	431	237 S	8 830	209	74 S	1 340	259	95 S	2 130	5
6	436	238 S	8 970	205	67 S	1 190	288	85 S	2 200	6
7	427	220 S	8 120	202	71 S	1 240	282	104 S	2 530	7
8	409	204 S	7 210	207	68 S	1 220	295	118 S	3 010	8
9	380	184 S	5 380	214	69 S	1 280	300	123 S	3 190	9
10	346	112 S	3 350	211	75 S	1 370	295	113 S	2 890	10
11	309	107 S	2 860	205	68 S	1 200	288	93 S	2 310	11
12	278	92 S	2 220	202	74 S	1 290	281	85 S	2 310	12
13	258	80 S	1 780	201	73 S	1 270	276	101 S	2 410	13
14	241	82 S	1 710	194	54 S	905	261	86 S	2 180	14
15	225	70 S	1 360	190	49 S	804	241	92 S	1 920	15
16	214	72 S	1 330	187	51 S	824	229	84 S	1 660	16
17	203	67 S	1 180	226	73 S	1 430	220	75 S	1 430	17
18	195	52 S	876	231	84 S	1 880	211	70 S	1 280	18
19	188	56 S	900	278	70 S	1 670	202	74 S	1 290	19
20	180	62 S	984	313	93 S	2 520	191	68 S	1 120	20
21	177	61 S	933	352	149 S	4 530	183	65 S	1 030	21
22	176	76 S	1 140	380 E	246 S	8 040	176	70 S	1 060	22
23	177	83 S	1 270	400 E	363 S	12 500	176	61 S	922	23
24	177	61 S	933	430 E	312 S	11 600	176	59 S	897	24
25	176	65 S	1 000	480 E	392 S	15 600	184	57 S	906	25
26	182	80 S	943	485 E	576 S	23 100	189	66 S	1 130	26
27	187	84 S	872	455 E	368 S	14 300	212	63 S	1 150	27
28	189	59 S	963	444 A	340 S	13 000	216	61 S	1 140	28
29	192	63 S	1 050	420 E	301 S	10 900	210	63 S	1 140	29
30	198	68 S	1 180	377	237 S	7 720	200	64 S	1 110	30
31	203	85 S	1 140	354	215 S	6 580				31
TOTAL	8 239		101 924	8 845		153 613	7 199		55 875	TOTAL

DAY	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DEC DAILY DISCHARGE (m^3/s)	DEC MEAN CONCENTRATION (mg/L)	DEC DAILY LOAD (t)	DAY
1	187	88 S	1 100	188	59 S	856	81.5 B	17	120	1
2	178	87 S	1 020	184	54 S	785	83.0 B	17	122	2
3	187	58 S	851	180	56 S	774	86.0 B	17	126	3
4	182	53 S	742	155	65 S	870	89.0 B	17	131	4
5	157	53 S	719	151	88 S	1 150	93.0 B	17	137	5
6	153	48 S	635	153 E	63 S	833	95.0 B	17	140	6
7	151	47 S	613	156 E	55 S	741	96.0 B	17	141	7
8	148	47	601	159 E	50 S	687	97.0 B	17	142	8
9	148	43 S	550	160 E	48	664	96.0 B	17	141	9
10	145	33 S	413	159 E	46	632	95.5 B	17	140	10
11	141	32 S	390	155 E	45	603	95.0 B	17	140	11
12	139	33 S	398	130 E	45	505	93.0 B	17	137	12
13	140	36 S	435	110 E	43	409	91.0 B	16	126	13
14	147	30 S	381	86.0 B	41	305	90.5 B	16	125	14
15	166	22 S	319	84.5 B	39	285	90.0 B	16	124	15
16	195	31 S	522	84.0 B	37	269	89.5 B	16	124	16
17	214	40 S	740	84.5 B	36	283	89.0 B	16	123	17
18	223	41 S	790	86.0 B	34	283	89.1 B	16	123	18
19	223	44 S	848	90.0 B	32	249	89.0 B	16	123	19
20	220	48 S	912	97.0 B	30	251	88.8 B	16	123	20
21	215	44 S	817	105 B	29	283	88.6 B	16	122	21
22	210	42 S	762	103 B	27	240	88.2 B	16	122	22
23	207	45 S	805	98.0 B	25	212	87.8 B	16	122	23
24	201	38 S	680	95.0 B	24	197	87.7 B	16	121	24
25	195	39 S	657	91.0 B	22	173	87.6 B	16	121	25
26	192	48 S	783	87.0 B	21	158	87.3 B	15	113	26
27	190	48 S	788	83.0 B	20	143	87.1 B	15	113	27
28	186	56 S	900	81.0 B	17	119	86.6 B	15	112	28
29	184	61 S	970	80.6 B	17	118	86.0 B	15	111	29
30	178	64 S	984	81.0 B	17	119	85.5 B	14	103	30
31	173	78 S	1 170				85.0 B	14	103	31
TOTAL	5 536		22 253	3 496.5		13 106	2 774.1		3 871	TOTAL

A - MANUAL GAUGE B - ICE CONDITIONS E - ESTIMATED S - SAMPLE(S) COLLECTED THIS DAY

RED RIVER NEAR LOCKPORT - STATION NO. 05DJ010

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
JAN 09	13:30	0.5	80.5	B	95.0		DH48	15	617														
FEB 07	11:20	0.5	46.7	B	95.0		DH48	17	504														
MAR 12	10:50	0.5	15.4	B	80.0	M	DH48	14	455														
MAR 12	10:52	0.5	14.9	B	85.0	M	DH48	14	480														
MAR 12	10:55	0.5	14.0	B	100	M	DH48	15	483														
MAR 12	10:57	0.5	12.8	B	120	M	DH48	13	470														
MAR 12	11:00	0.5	5.07	B	150	M	DH48	12	467														
MAR 21	14:10	0.5	89.6	B	80.0	M	DH48	129	390														
MAR 21	14:15	0.5	47.0	B	85.0	M	DH48	144	383														
MAR 21	14:50	0.5	39.1	B	95.0	M	DH48	149	388														
MAR 21	14:55	0.5	52.6	B	115	M	DH48	149	392														
MAR 21	15:00	0.5	37.5	B	145	M	DH48	128	394														
MAR 27	14:00	0.5	152	B	50.0	M	D49	320	247														
MAR 27	14:05	0.5	145	B	75.0	M	D49	322	244														
MAR 27	14:10	0.5	132	B	95.0	M	D49	325	236														
MAR 27	14:15	0.5	184	B	115	M	D49	312	234														
MAR 27	14:20	0.5	187	B	150	M	D49	301	234														
APR 02	13:00	1.0	165	B	50.0	M	D49	368	236	31	50	70	83	92	95	98	100				5	45	50
APR 02	13:05	1.0	159	B	75.0	M	D49	375	228	48	58	74	83	92	95	98	100				5	37	58
APR 02	13:10	1.0	149	B	95.0	M	D49	361	224	43	53	75	85	93	95	98	100				5	42	53
APR 02	13:15	1.0	175	B	115	M	D49	366	228	39	60	75	86	94	98	99	100				4	36	60
APR 02	13:20	1.0	184	B	150	M	D49	335	227	46	53	70	83	92	95	97	99	100			5	42	53
APR 04	17:00	1.0	860	W	MID		DH59	359	238														
APR 05	16:00	3.0	812	H	MID		DH59	361															
APR 06	14:00	2.0	698	H	MID		DH59	305															
APR 07	18:30	2.0	628	H	MID		DH59	330															
APR 08	14:00	2.0	561	H	MID		DH59	412															
APR 09	12:30	3.0	507	H	MID		DH59	382															
APR 10	12:35	4.0	495	H	MID		DH59	387															
APR 10	13:40	4.0	88.4		50.0	M	D48	384	293	37	52	77	90	97	98	100					1	47	52
APR 10	13:45	4.0	107		75.0	M	D48	385	291	37	55	77	92	98	99	100					1	44	55
APR 10	13:50	4.0	105		95.0	M	D48	389	291	38	53	76	90	97	98	100					2	45	53
APR 10	13:55	4.0	114		115	M	D48	381	293	29	49	73	91	95	98	98	99	100			2	49	49
APR 10	14:00	4.0	94.4		150	M	D48	370	287	41	48	77	89	97	98	99	100				2	50	48
APR 11	16:30	5.0	518	H	MID		DH59	438	304														
APR 12	12:30	3.0	489	H	MID		DH59	666															
APR 13	11:00	5.0	427	H	MID		DH59	558															
APR 14	18:30	8.0	420	H	MID		DH59	398															
APR 15	12:30	9.0	416	H	MID		DH59	412															
APR 16	16:30	8.0	410	H	MID		DH59	419															
APR 17	12:30	9.0	389	H	MID		DH59	401															
APR 18	12:30	9.0	382	H	MID		DH59	353	340														
APR 19	17:00	11.0	382	H	MID		DH59	352															
APR 20	14:00	10.0	340	H	MID		DH59	417															
APR 21	14:30	11.0	317	H	MID		DH59	331															
APR 22	12:30	11.0	309	H	MID		DH59	294															
APR 23	12:15	11.0	301	H	MID		DH59	283															
APR 24	12:35	11.0	292	H	MID		DH59	253	388														
APR 25	17:00	9.0	283	H	MID		DH59	153															
APR 26	16:45	10.0	274	H	MID		DH59	92															
APR 27	14:00	10.0	266	H	MID		DH59	91															
APR 28	18:00	13.0	264	H	MID		DH59	91															
APR 29	09:00	12.0	44.4		150	M	D49	79	424														
APR 29	09:05	12.0	83.8		115	M	D49	84	420														
APR 29	09:10	12.0	81.3		95.0	M	D49	92	418														
APR 29	09:15	12.0	82.8		75.0	M	D49	95	432														
APR 29	09:20	12.0	42.2		50.0	M	D49	103	427														
APR 29	10:05	12.0	267	H	MID		DH59	120	414														
APR 29	12:00	12.0	267	H	MID		DH59	86															
APR 30	12:30	12.0	267	H	MID		DH59	100															
MAY 01	16:45	14.0	264	H	MID		DH59	84	418														
MAY 02	12:45	14.0	259	H	MID		DH59	73															
MAY 03	10:15	14.0	251	H	MID		DH59	83															
MAY 04	18:00	14.0	258	H	MID		DH59	63															
MAY 05	13:00	15.0	260	H	MID		DH59	68															
MAY 06	12:45	15.0	261	H	MID		DH59	80															
MAY 07	12:30	16.0	264	H	MID		DH59	70	432														
MAY 08	12:45	17.0	251	H	MID		DH59	67															
MAY 09	15:00	17.0	244	H	MID		DH59	58															
MAY 10	12:30	18.0	231	H	MID		DH59	53															
MAY 11	11:30	17.0	223	H	MID		DH59	50															
MAY 12	14:00	15.0	228	H	MID		DH59	54															
MAY 13	12:30	15.0	232	H	MID		DH59	80															
MAY 14	12:30	16.0	235	H	MID		DH59	82	447														
MAY 15	17:00	15.0	248	H	MID		DH59	80															
MAY 16	17:00	15.0	291	H	MID		DH59	88															
MAY 17	07:45	14.0	400	Y	MID		DH59	129															
MAY 18	11:00	16.0	440	Y	MID		DH59	436															
MAY 19	12:30	15.0	470	Y	MID		DH59	518	404	30	53	75	83	97	98	99	100				2	45	53
MAY 20	15:50	15.0	497	H	MID		DH59	1560	271	28	61	83	93	98	98	99	100				2	37	61
MAY 21	15:00	17.0	524	H	MID		DH59	1110	284	38	63	80	89	97	98	99	100				2	38	63
MAY 22	12:45	17.0	548	H	MID		DH59	863	286	41	61	79	89	98	99	99	100				1	38	61
MAY 23	12:30	17.0	583	H	MID		DH59	873	306	35	54	76	89	94	98	98	99	100			2	44	54
MAY 24	10:30	15.0	108		150	M	D49	544	342	44	53	76	88	97	98	99	100				2	45	53
MAY 24	10:35	15.0	127		115	M	D48	549	335	39	61	78	89	96	98	100					2	37	61
MAY 24	10:40	15.0	112		95.0	M	D48	553	338	34	55	76	88	96	98	100					2	43	55
MAY 24	10:45	15.0	118		75.0	M	D49	531	340	28	53	72	84	94	98	98	100				4	43	53
MAY 24	10:50	15.0	82.7		50.0	M	D48	557	355	38	54	73	85	93	96	97	99	100			4	42	54
MAY 24	11:30	15.0	578	H	MID		DH59	567	334	39	53	75	87	97	99	99	100				1	46	53
MAY 24	19:00	17.0	578	H	MID		DH59	548															
MAY 25	15:00	17.0	578	H	MID		DH59	475															
MAY 26	13:00	18.0	574	H	MID		DH59	372															
MAY 27	12:45	17.0	555	H	MID		DH59	350															
MAY 28	12:30	18.0	535	H	MID		DH59	312															
MAY 29	07:45	17.0	508	H	MID		DH59	295															
MAY 30	12:30	18.0	471	H	MID		DH59	256															
MAY 31	17:00	17.0	444	H	MID		DH59	101	445														
JUN 01	11:30	18.0	415	Y	MID		DH59	122															
JUN 02	12:00	18.0	400	Y	MID		DH59	134															
JUN 03	12:30	18.0	395	Y	MID		DH59	141															
JUN 04	16:30	16.0	393	H	MID		DH59	126															
JUN 05	17:00	17.0	400	H	MID		DH59	132															
JUN 06	12:30	16.0	409	H	MID		DH59	189	424														

NOTE - SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1985

DISCHARGE SYMBOL(S): B - ICE CONDITIONS H - DAILY MEAN W - DAILY MEAN, ICE CONDITIONS
Y - DAILY MEAN, ESTIMATED

VERTICAL SYMBOL(S): M - A SEDIMENT MEASUREMENT VERTICAL

CONTINUED

MANITOBA

RED RIVER NEAR LOCKPORT - STATION NO. 05OJ010 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)		SINGLE VERTICAL SAMPLING (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
JUN	07 11:00	17.0	430	H	MID		DH59	223															
JUN	08 16:00	19.0	449	H	MID		DH59	315	411	39	54	73	85	96	98	99	100				4	42	54
JUN	09 11:30	16.0	460	H	MID		DH59	310															
JUN	10 20:00	17.0	465	Y	MID		DH59	413															
JUN	11 16:30	18.0	467	Y	MID		DH59	342															
JUN	12 07:45	17.0	436	V	MID		DH59	326															
JUN	12 09:00	17.0	81.7		150	M	D49	289	407														
JUN	12 09:05	17.0	86.3		115	M	D49	307	407														
JUN	12 09:10	17.0	90.5		95.0	M	D49	330	415														
JUN	12 09:15	17.0	94.7		75.0	M	D49	343	409														
JUN	12 09:20	17.0	72.7		50.0	M	D49	358	415														
JUN	12 12:45	17.0	436	V	MID		DH59	275	484														
JUN	13 16:30	18.0	415	Y	MID		DH59	356	401														
JUN	14 07:45	18.0	395	Y	MID		DH59	350															
JUN	15 12:00	18.0	372	H	MID		DH59	228															
JUN	16 13:30	18.0	345	H	MID		DH59	238															
JUN	17 07:30	17.0	321	H	MID		DH59	200															
JUN	18 12:30	18.0	301	H	MID		DH59	143															
JUN	19 16:30	20.0	283	H	MID		DH59	127															
JUN	20 12:30	20.0	269	H	MID		DH59	90	410														
JUN	21 10:00	19.0	259	H	MID		DH59	118															
JUN	22 09:00	17.0	250	H	MID		DH59	86															
JUN	23 12:00	18.0	243	H	MID		DH59	101															
JUN	24 18:30	17.0	238	H	MID		DH59	103															
JUN	25 18:30	18.0	235	H	MID		DH59	96															
JUN	26 17:00	18.0	232	H	MID		DH59	83															
JUN	27 17:00	18.0	231	H	MID		DH59	89	443														
JUN	28 17:00	17.0	237	H	MID		DH59	91															
JUN	29 17:30	17.0	248	H	MID		DH59	78															
JUN	30 16:30	18.0	272	H	MID		DH59	110															
JUL	01 17:30	19.0	308	H	MID		DH59	221															
JUL	02 17:00	20.0	355	H	MID		DH59	286															
JUL	03 08:00	19.0	405	Y	MID		DH59	309	368														
JUL	04 14:30	21.0	418	H	MID		DH59	248															
JUL	05 08:00	20.0	431	H	MID		DH59	234															
JUL	06 18:00	24.0	436	H	MID		DH59	237															
JUL	07 14:30	25.0	427	H	MID		DH59	217															
JUL	08 08:00	22.0	409	H	MID		DH59	205															
JUL	08 07:45	22.0	380	H	MID		DH59	178															
JUL	10 13:30	22.0	345	H	MID		DH59	107	351														
JUL	11 07:45	22.0	309	H	MID		DH59	108															
JUL	12 06:45	22.0	278	H	MID		DH59	92															
JUL	13 08:30	23.0	258	H	MID		DH59	78															
JUL	14 10:00	23.0	241	H	MID		DH59	84															
JUL	15 07:30	22.0	225	H	MID		DH59	66															
JUL	16 07:45	22.0	214	H	MID		DH59	72															
JUL	17 08:00	22.0	203	H	MID		DH59	88	383														
JUL	18 08:00	22.0	195	H	MID		DH59	51															
JUL	19 07:30	22.0	186	H	MID		DH59	54															
JUL	20 16:00	23.0	180	H	MID		DH59	61															
JUL	21 20:00	22.0	177	H	MID		DH59	84															
JUL	22 21:00	22.0	176	H	MID		DH59	80															
JUL	23 12:30	22.0	177	H	MID		DH59	83															
JUL	24 15:00	22.0	177	H	MID		DH59	53															
JUL	25 07:45	20.0	178	H	MID		DH59	82	376														
JUL	26 14:00	22.0	182	H	MID		DH59	56															
JUL	27 17:45	22.0	187	H	MID		DH59	59															
JUL	28 13:00	21.0	189	H	MID		DH59	58															
JUL	29 07:45	20.0	192	H	MID		DH59	82															
JUL	30 08:00	20.0	188	H	MID		DH59	70															
JUL	30 08:30	21.0	198	H	MID		DH59	82	340														
JUL	30 10:50	21.0	34.1		150	M	DH59	57	345														
JUL	30 10:55	21.0	47.2		120	M	DH59	80	345														
JUL	30 11:00	21.0	46.0		95.0	M	DH59	65	339														
JUL	30 11:05	21.0	38.5		80.0	M	DH59	86	342														
JUL	30 11:10	21.0	47.8		60.0	M	DH59	87	331														
JUL	31 12:00	22.0	203	H	MID		DH59	84															
AUG	01 13:15	23.0	206	H	MID		DH59	58															
AUG	02 09:00	22.0	207	H	MID		DH59	59	352														
AUG	03 14:30	22.0	210	H	MID		DH59	67															
AUG	04 12:00	22.0	212	H	MID		DH59	70															
AUG	05 13:30	22.0	209	H	MID		DH59	75															
AUG	06 16:45	23.0	205	H	MID		DH59	67															
AUG	07 12:05	22.0	202	H	MID		DH59	71															
AUG	08 12:08	22.0	207	H	MID		DH59	85															
AUG	09 15:08	21.0	214	H	MID		DH59	75	329														
AUG	10 16:33	21.0	211	H	MID		DH59	71															
AUG	11 12:00E		205	H	MID		DH59	68															
AUG	12 20:00	19.0	202	H	MID		DH59	80															
AUG	13 16:45	19.0	201	H	MID		DH59	89															
AUG	14 20:45	18.0	194	H	MID		DH59	51															
AUG	15 12:45	18.0	190	H	MID		DH59	46															
AUG	16 12:40	18.0	187	H	MID		DH59	48	350														
AUG	17 17:28	18.0	228	H	MID		DH59	82															
AUG	18 18:55	18.0	231	H	MID		DH59	78															
AUG	19 20:50	18.0	276	H	MID		DH59	88															
AUG	20 12:30	17.0	313	H	MID		DH59	87															
AUG	21 20:00	17.0	352	H	MID		DH59	188															
AUG	22 07:55	17.0	380	V	MID		DH59	204															
AUG	23 13:50	17.0	400	V	MID		DH59	363															
AUG	24 12:30	18.0	430	V	MID		DH59	278															
AUG	25 20:02	19.0	460	V	MID		DH59	402	323	36	58	76	92	96	98	99	100				2	40	58
AUG	26 16:40	19.0	485	V	MID		DH59	554	268	42	64	80	93	97	98	99	100				2	34	64
AUG	27 12:10	18.0	486	V	MID		DH59	297	272	46	69	88	94	97	97	99	100				3	28	69
AUG	28 09:20	17.0	76.4		50.0	M	D49	366	272														
AUG	28 09:25	17.0	83.2		75.0	M	D49	359	276														
AUG	28 09:30	17.0	89.8		95.0	M	D49	357	278														
AUG	28 09:35	17.0	99.6		115	M	D49	342	282														
AUG	28 09:40	17.0	85.0		150	M	D49	281	276														
AUG	28 18:45	18.0	444	V	MID		DH59	301															
AUG	29 18:35	18.0	420	Y	MID		DH59	226															
AUG	30 07:50	17.0	377	H	MID		DH59	205															
AUG	31 17:00	17.0	354	H	MID		DH59	180															

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1985

TIME SYMBOL: E - ESTIMATED
DISCHARGE SYMBOL(S): H - DAILY MEAN V - DAILY MEAN; MANUAL GAUGE Y - DAILY MEAN; ESTIMATED
VERTICAL SYMBOL(S): M - A SEDIMENT MEASUREMENT VERTICAL

CONTINUED

RED RIVER NEAR LOCKPORT - STATION NO. 05OJ010 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
SEP 01	14:05	18.0	326	H	MID		DH59	108	333														
SEP 02	19:15	18.0	300	H	MID		DH59	87															
SEP 03	18:35	18.0	279	H	MID		DH59	107															
SEP 04	18:40	18.0	263	H	MID		DH59	87															
SEP 05	20:22	18.0	259	H	MID		DH59	88															
SEP 06	20:03	17.0	288	H	MID		DH59	80															
SEP 07	16:03	18.0	282	H	MID		DH59	95															
SEP 08	07:53	15.0	295	H	MID		DH59	104	346														
SEP 09	18:30	15.0	300	H	MID		DH59	111															
SEP 10	18:35	16.0	296	H	MID		DH59	98															
SEP 11	18:15	17.0	288	H	MID		DH59	77															
SEP 12	12:35	15.0	281	H	MID		DH59	85															
SEP 13	19:40	15.0	276	H	MID		DH59	87															
SEP 14	10:30	15.0	261	H	MID		DH59	86															
SEP 15	11:00	15.0	241	H	MID		DH59	81	372														
SEP 16	15:12	16.0	229	H	MID		DH59	73															
SEP 17	16:37	15.0	220	H	MID		DH59	63															
SEP 18	18:02	16.0	211	H	MID		DH59	63															
SEP 19	18:50	14.0	202	H	MID		DH59	87															
SEP 20	12:38	13.0	191	H	MID		DH59	80															
SEP 21	12:40	13.0	183	H	MID		DH59	57															
SEP 22	12:43	13.0	178	H	MID		DH59	87	376														
SEP 23	12:35	12.0	175	H	MID		DH59	52															
SEP 24	16:00	11.0	178	H	MID		DH59	56															
SEP 25	12:30	10.0	38.7		50.0	M	DH59	62	377														
SEP 25	12:35	10.0	44.5		75.0	M	DH59	82	376														
SEP 25	12:40	10.0	43.4		95.0	M	DH59	61	378														
SEP 25	12:45	10.0	44.3		115	M	DH59	52	371														
SEP 25	12:50	10.0	39.4		150	M	DH59	52	368														
SEP 25	14:00	10.0	184	H	MID		DH59	46	372														
SEP 25	16:15	11.0	184	H	MID		DH59	52															
SEP 26	12:17	10.0	199	H	MID		DH59	58															
SEP 27	12:05	10.0	212	H	MID		DH59	57															
SEP 28	13:45	9.0	216	H	MID		DH59	55	380														
SEP 29	13:25	10.0	210	H	MID		DH59	54															
SEP 30	16:15	9.0	200	H	MID		DH59	59															
OCT 01	12:11	10.0	187	H	MID		DH59	59	368														
OCT 02	17:00	10.0	176	H	MID		DH59	59															
OCT 03	12:35	9.0	167	H	MID		DH59	55															
OCT 04	12:10	8.0	162	H	MID		DH59	52															
OCT 05	13:23	9.0	157	H	MID		DH59	49															
OCT 06	13:30	9.0	153	H	MID		DH59	43															
OCT 07	12:30	8.0	151	H	MID		DH59	45	405														
OCT 09	13:38	5.0	148	H	MID		DH59	41															
OCT 10	12:34	5.0	145	H	MID		DH59	32															
OCT 11	12:05	5.0	141	H	MID		DH59	30															
OCT 12	16:31	7.0	139	H	MID		DH59	29	427														
OCT 13	17:31	7.0	140	H	MID		DH59	41															
OCT 14	12:03	5.0	147	H	MID		DH59	27															
OCT 15	12:30	5.0	168	H	MID		DH59	24	411														
OCT 16	15:18	5.0	195	H	MID		DH59	33															
OCT 17	16:12	6.0	214	H	MID		DH59	40															
OCT 18	15:40	7.0	223	H	MID		DH59	40															
OCT 19	16:54	7.0	223	H	MID		DH59	38															
OCT 20	13:17	7.0	220	H	MID		DH59	48															
OCT 21	16:10	8.0	215	H	MID		DH59	40	410														
OCT 22	12:41	8.0	210	H	MID		DH59	41															
OCT 23	18:00	8.0	207	H	MID		DH59	41															
OCT 24	12:45	8.0	201	H	MID		DH59	34															
OCT 25	07:40	7.0	195	H	MID		DH59	32	427														
OCT 25	10:00	7.0	40.2		150	M	DH59	29	432														
OCT 25	10:05	7.0	51.3		115	M	DH59	32	432														
OCT 25	10:10	7.0	46.5		95.0	M	DH59	34	428														
OCT 25	10:15	7.0	47.7		75.0	M	DH59	35	427														
OCT 25	10:20	7.0	34.3		50.0	M	DH59	35	428														
OCT 25	16:25	9.0	195	H	MID		DH59	41															
OCT 26	17:25	8.0	192	H	MID		DH59	48															
OCT 27	13:15	8.0	190	H	MID		DH59	44															
OCT 28	16:00	9.0	188	H	MID		DH59	57	489														
OCT 29	15:25	8.0	184	H	MID		DH59	59															
OCT 30	12:01	7.0	178	H	MID		DH59	81															
OCT 31	12:40	7.0	173	H	MID		DH59	81															
NOV 01	11:03	6.0	168	H	MID		DH59	57															
NOV 02	15:30	7.0	164	H	MID		DH59	55															
NOV 03	13:14	6.0	160	H	MID		DH59	57															
NOV 04	12:45	6.0	155	H	MID		DH59	82	446														
NOV 05	16:03	6.0	151	H	MID		DH59	80															
NOV 06	11:21	5.0	153	Y	MID		DH59	84															
NOV 07	13:00	3.0	156	Y	MID		DH59	56															
NOV 08	12:13	2.0	159	Y	MID		DH59	50	481														
NOV 28	11:30	0.5	81.0	W	95.0		DH48	17	541														

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1985

DISCHARGE SYMBOL(S): H - DAILY MEAN W - DAILY MEAN; ICE CONDITIONS Y - DAILY MEAN; ESTIMATED
VERTICAL SYMBOL(S): M - A SEDIMENT MEASUREMENT VERTICAL

MANITOBA

RED RIVER NEAR LOCKPORT - STATION NO. 05OJO1O

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLES	CONCENTRATION MAXIMUM (mg/L)		CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY : JAN-DEC MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1962	---PCCCCCCCC	MANUAL	1	230	APR 25	10	OCT 04	183 000	APR 25	2 080 000	---	---	---
1963	CCCCCCCCCCCC	MANUAL	1	590	JUN 05	4	FEB 19	58 230	APR 14	1 300 000	3 580	3 580	---
1964	CCCCCCCCCCCC	MANUAL	2	080	APR 18	5	OCT 04	178 000	APR 18	1 970 000	5 380	4 470	20.4
1965	CCCCCCCCCCCC	MANUAL	2	450	APR 14 *	10	MAR 02	289 000	APR 16	3 490 000	9 550	5 180	28.8
1966	CCCCCCCCCCCC	MANUAL	1	340	JUL 05	8	DEC 23	137 000	APR 10	2 970 000	8 140	5 680	20.2
1967	CCCCCCCCCCCC	MANUAL	1	010	APR 23	1	AUG 14 *	139 000	APR 23	2 420 000	6 630	5 850	15.7
1968	CCCCCCCCCCCC	MANUAL	1	300	JUN 16	4	JAN 25	42 300	JUN 16	883 000	2 410	5 950	18.8
1969	CCCCCCCCCCCC	MANUAL	1	700	APR 17	6	FEB 14	234 000	APR 17	3 420 000	9 380	6 440	16.4
1970	CCCCCCCCCCCC	MANUAL	1	140	APR 18	6	OCT 05	140 000	APR 21	3 120 000	8 550	6 700	14.2
1971	CCCCCCCCCCCC	MANUAL	2	230	APR 13	3	FEB 08	304 000	APR 13 *	1 910 000	5 230	6 540	13.1
1972	CCCCCCCCCCCC	DUAL		753	APR 17	7	OCT 16	66 600	APR 21	1 440 000	3 920	6 280	12.8
1973	CCCCCCCCCCCC	DUAL		593	MAR 28	2	JAN 19	27 200	MAR 28	258 000	701	5 770	15.4
1974	CCCCCCCCCCCC	DUAL	1	010	APR 24	3	FEB 01	212 000	APR 24	3 370 000	9 240	6 080	14.2
1975	CCCCCCCCCCCC	DUAL	1	020	APR 24	11	FEB 27	91 700	APR 24	2 070 000	5 680	6 030	13.2
1976	CCCCCCCCCCCC	DUAL		807	APR 11	10	OCT 19	103 000	APR 09	1 890 000	5 170	5 970	12.4
1977	CCCCCCCCCCCC	DUAL		238	APR 14	6	MAY 10	5 250	APR 13	51 500	141	5 580	14.1
1978	CCCCCCCCCCCC	MANUAL		760	APR 11	13	FEB 06	115 000	APR 14	2 010 000	5 510	5 570	13.2
1979	CCCCCCCCCCCC	MANUAL		798	APR 22	10	DEC 19	161 000	APR 23	3 710 000 *	10 200	5 850	12.7
1980	CCCCCCCCCCCC	MANUAL	1	850	APR 14	9	DEC 17	163 000	APR 12	1 460 000	3 980	5 740	12.4
1981	CCCCCCCCCCCC	MANUAL		116	APR 26	8	JAN 15	3 940	APR 02	86 800	238	5 450	13.4
1982	CCCCCCCCCCCC	MANUAL	1	210	APR 17	6	FEB 19	124 000	APR 17	1 540 000	4 220	5 390	12.9
1983	CCCCCCCCCCCC	MANUAL		487	APR 14	12	JAN 14	51 700	APR 10	1 380 000	3 780	5 320	12.5
1984	CCCCCCCCCCCC	MANUAL	1	020	JUN 16	11	FEB 10	99 800	APR 07	1 220 000	3 340	5 230	12.3
1985	CCCCCCCCCCCC	MANUAL	1	850	MAY 20	12	MAR 12	64 800	MAY 20	1 530 000	4 180	5 180	11.9

DUAL - MANUAL AND AUTOMATIC SAMPLING MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

MANITOBA

ROSEAU RIVER AT GARDENTON - STATION NO. 05OD004

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 49 05 16 N LONG 96 41 15 W
DRAINAGE AREA: 4 470 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 12 400 TONNES FOR THE PERIOD MAR 01 TO NOV 04

REMARKS:

DAY	MAR DAILY DISCHARGE (m³/s)	MAR MEAN CONCENTRATION (mg/L)	MAR DAILY LOAD (t)	APR DAILY DISCHARGE (m³/s)	APR MEAN CONCENTRATION (mg/L)	APR DAILY LOAD (t)	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	DAY
1	0.145 B	10	0.13	15.1 B	43	56.1	18.3	17	26.9	1
2	0.145 B	10	0.13	16.8 B	49	80.0	17.5	14 S	21.3	2
3	0.145 B	10	0.13	31.7 B	80 S	219	16.7	13	18.8	3
4	0.145 B	10	0.13	36.4	79 S	262	16.0	13	18.0	4
5	0.145 B	10	0.13	35.1	50	152	15.7	13	17.6	5
6	0.145 B	10	0.13	33.8	38	111	15.8	13 S	18.2	6
7	0.145 B	11 S	0.14	33.2	33	94.7	15.6	13	17.4	7
8	0.137 B	12	0.14	32.6	33 S	92.9	14.8	12 S	15.4	8
9	0.131 B	12	0.14	32.3	33 S	92.1	14.0	12	14.5	9
10	0.130 B	12	0.13	31.8	28 S	76.9	13.0	13	14.8	10
11	0.134 B	11	0.13	31.0	25	67.0	12.3	13	13.8	11
12	0.133 B	11	0.13	29.7	25 S	64.2	11.5	13	12.9	12
13	0.129 B	10	0.11	28.4	24 S	58.9	12.3	14 S	14.9	13
14	0.119 B	11	0.11	26.6	25	57.5	16.5	16	25.7	14
15	0.108 B	12	0.11	25.0	33 S	74.1	20.3	29	50.9	15
16	0.110 B	12	0.11	25.9	44	98.5	22.5	40 S	77.8	16
17	0.110 B	10	0.10	25.9	49 S	110	23.7	48	94.2	17
18	0.148 B	9	0.12	25.7	49	109	24.5	49	105	18
19	0.221 B	10	0.19	25.3	43	84.0	25.6	45 S	99.5	19
20	0.272 B	11	0.26	24.4	38	80.1	26.3	41 S	93.2	20
21	0.303 B	11	0.29	22.8	32	63.0	27.0	37	86.3	21
22	0.441 B	13	0.50	21.1	27	49.3	27.6	35	83.5	22
23	1.95 B	13	2.19	19.5	23 S	38.8	28.2	32 S	78.0	23
24	2.02 B	15	2.62	18.1	23	36.0	28.5	29 S	71.4	24
25	4.87 B	16	6.73	19.7	24	40.8	28.8	28	82.2	25
26	5.56 B	19	9.16	20.0	24 S	41.5	28.9	30	74.9	26
27	10.5 B	24	21.8	20.2	28 S	45.4	28.8	31 S	77.1	27
28	12.3 B	28	29.8	20.0	25	43.2	28.6	31	81.9	28
29	10.2 B	32 S	28.2	19.5	22	37.3	28.6	30	46.4	29
30	13.7 B	36	42.6	19.0	19	31.3	28.7	20	49.6	30
31	13.8 B	39	46.5				28.0	19 S	47.6	31
TOTAL	78.562		193.08	772.8		2 478.4	685.8		1 800.4	TOTAL

DAY	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	JUL DAILY DISCHARGE (m³/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m³/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	DAY
1	28.7	20	49.6	29.1	51 S	128	9.99	15	12.9	1
2	28.1	28	70.4	29.7	44	113	8.56	15	11.1	2
3	27.7	36 S	90.8	30.1	36 S	98.8	7.80	14	9.19	3
4	27.7	33	79.0	30.8	35	93.1	11.3	16	15.6	4
5	27.6	29	69.2	31.2	31	83.6	20.4	29 S	51.1	5
6	27.7	28 S	67.0	31.5	28	76.2	33.6	42	85.6	6
7	27.9	27	65.1	32.0	24 S	66.4	34.6	30 S	63.8	7
8	28.2	26	63.3	32.8	23	65.2	35.8	28	58.0	8
9	28.2	25	60.9	33.9	22	64.4	36.9	23	53.5	9
10	28.1	23 S	55.8	34.6	22 S	66.6	27.3	21 S	49.5	10
11	27.9	22 S	53.0	35.4	21	64.2	27.6	20	47.7	11
12	27.6	21	50.1	36.1	19 S	59.3	28.7	21 S	52.1	12
13	27.2	20	47.0	37.0	19	60.7	29.1	23	57.8	13
14	26.8	20	46.3	37.7	21	68.4	28.4	23	56.4	14
15	26.3	17	38.6	38.4	22 S	73.0	27.7	22	52.7	15
16	25.5	17 S	37.5	38.2	22	74.8	27.0	21	49.0	16
17	23.9	15	31.0	40.5	21 S	73.5	27.5	21	49.5	17
18	21.9	14 S	26.5	40.7	21	73.8	27.5	21	49.9	18
19	19.9	13	22.4	40.4	20 S	69.8	27.5	21	49.9	19
20	18.2	14	23.0	40.2	21	73.1	27.6	21	50.4	20
21	16.8	13	18.0	39.7	21	72.0	28.1	21	51.0	21
22	15.6	11	14.8	38.8	20	67.0	28.4	22	54.0	22
23	14.7	12 S	15.2	37.9	20	65.5	29.8	22	56.6	23
24	14.8	14 S	17.8	36.6	20	63.2	30.9	22	58.7	24
25	15.6	18	24.6	34.8	19	57.1	31.1	22	59.1	25
26	16.6	22	31.6	31.7	17	46.6	31.2	23 S	62.0	26
27	20.5	51	90.3	27.8	17 S	40.8	31.2	23	62.0	27
28	24.9	102 S	219	22.1	17	32.5	31.2	22	59.3	28
29	27.2	86	202	17.3	16	23.9	31.4	21	57.0	29
30	28.2	62	151	14.1	15 S	18.3	31.5	22	59.9	30
31				11.8	15	15.3	32.4	22	61.6	31
TOTAL	720.3		1 831 0	1 014 0		2 047.0	802.05		1 567.25	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

MANITOBA

ROSEAU RIVER AT GARDENTON - STATION NO. 05OD004

SUSPENDED SEDIMENT FOR 1985

DAY	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DAY
1	32.8	22	62.3	25.2	14	30.5	15.8	14	19.1	1
2	33.0	21	59.9	22.9	14	27.7	15.1	14	18.3	2
3	34.6	22	65.8	20.8	13	23.4	14.8	13	16.4	3
4	35.3	22	67.1	19.0	14	23.0		13 E		4
5	36.1	21	65.5	17.6	14	21.3				5
6	36.7	21	66.6	16.5	14	20.0				6
7	36.6	21	66.8	15.7	14	19.0				7
8	36.7	21	66.6	15.5	14	18.7				8
9	36.7	20	63.4	15.0	14	18.1				9
10	36.5	20 E	63.1	15.2	14 E	18.4				10
11	36.7	21	66.9	16.0	14	19.4				11
12	36.9	22	70.1	18.0	14	21.8				12
13	37.3	22	70.9	20.8	16	26.8				13
14	37.6	22	71.5	22.8	16	31.5				14
15	38.0	22	72.2	24.2	16	33.5				15
16	38.7	20	66.9	25.0	16	34.5				16
17	39.2	21	71.1	25.9	16	35.8				17
18	38.9	21	70.6	26.5	16	36.8				18
19	38.7	21	70.2	26.8	16	37.0				19
20	38.8	22	73.4	26.7	17	39.2				20
21	38.2	21	69.3	26.4	16	36.5				21
22	37.8	20	65.3	26.0	16	40.4				22
23	37.0	19	60.7	25.6	17	37.6				23
24	36.0	19	59.1	24.5	16	33.9				24
25	34.8	19	57.1	23.1	17	33.9				25
26	33.5	17	49.2	22.1	17	32.5				26
27	32.3	16	44.7	20.7	16	28.6				27
28	30.9	16	42.7	19.5	16	27.0				28
29	29.3	15	38.0	18.5	16	25.6				29
30	27.4	15	35.5	17.4	15	22.5				30
31				16.5	15	21.4				31
TOTAL	1 073.0		1 872.2	686.5		878.5	45		53.8	TOTAL

ROSEAU RIVER AT GARDENTON - STATION NO. 05OD004

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP	INSTANT. DISCHARGE		SINGLE SAMPLING VERTICAL		TYPE OF SAMPLER	INSTANT. CONCENT.		DISSOLVED SOLIDS	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES										PERCENT		
											.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	SAND	SILT	CLAY
		(C)	(m³/s)		(m)			(mg/L)		(mg/L)													
MAR 07	14:30	0.5	0.145	B	MID	X	DIP	117	C	403													
MAR 29	13:45	0.5	10.9	B	9.0		DHSS	32		153													
APR 03	17:30	2.0	37.4		9.0		DHSS	183	C	150													
APR 04	16:00	3.0	37.0		9.0		DHSS	71															
APR 08	17:00	3.0	33.3		9.0		DHSS	32															
APR 09	12:45	4.0	32.0		9.0		DHSS	34	C	173													
APR 10	14:00	5.0	31.6		9.0		DHSS	26															
APR 12	15:00	8.0	29.1		9.0		DHSS	25															
APR 13	11:00	7.0	28.0		9.0		DHSS	23															
APR 15	15:00	11.0	25.3		9.0		DHSS	34		195													
APR 17	17:00	9.5	25.3		9.0		DHSS	50															
APR 23	15:00	13.5	18.3		9.0		DHSS	22		211													
APR 26	18:00	11.0	19.1		9.0		DHSS	25															
APR 27	15:30	12.0	19.2		9.0		DHSS	22		217													
MAY 02	10:30	14.0	16.3		9.0		DHSS	14															
MAY 08	13:00	14.0	14.1		9.0		DHSS	12		236													
MAY 09	15:00	17.0	13.5		9.0		DHSS	12															
MAY 13	14:00	14.0	10.8		9.0		DHSS	14		257													
MAY 15	12:00	13.0	21.7		9.0		DHSS	41															
MAY 19	12:00	15.0	24.9		9.0		DHSS	45															
MAY 20	19:00	15.0	25.9		9.0		DHSS	40		250													
MAY 23	15:00	20.0	27.7		9.0		DHSS	32															
MAY 24	16:00	20.0	28.0		9.0		DHSS	29															
MAY 27	13:20	18.0	8.24		17.0	M	DHSS	37		251													
MAY 27	13:35	18.0	7.08		21.0	M	DHSS	84	A	265													
MAY 27	13:40	18.0	5.40		24.0	M	DHSS	25		259													
MAY 27	13:45	18.0	4.66		27.0	M	DHSS	23		257													
MAY 27	13:50	18.0	4.37		31.0	M	DHSS	26		259													
MAY 27	13:55	18.0	39.8		9.0		DHSS	32		264													
MAY 27	19:00	18.0	28.3		9.0		DHSS	23															
MAY 31	16:30	18.0	28.7		9.0		DHSS	19															
JUN 03	18:30	15.0	27.1		9.0		DHSS	37		268													
JUN 06	11:30	18.0	27.1		9.0		DHSS	28															
JUN 10	18:00	18.0	27.5		9.0		DHSS	23		254													
JUN 11	18:30	18.0	27.3		9.0		DHSS	21															
JUN 16	17:30	19.0	24.5		9.0		DHSS	18															
JUN 18	18:00	20.0	20.3		9.0		DHSS	13		276													
JUN 23	18:30	17.0	13.1		9.0		DHSS	12															
JUN 24	09:00	16.0	13.3		9.0		DHSS	14		282													
JUN 28	14:00	16.0	24.6		9.0		DHSS	111															
JUL 01	18:00	21.0	28.9		9.0		DHSS	50		203													
JUL 03	19:00	24.0	30.0		9.0		DHSS	38															
JUL 07	18:00	27.0	33.1		9.0		DHSS	24		231													
JUL 10	18:00	23.0	34.4		9.0		DHSS	22															
JUL 12	18:30	23.0	36.1		9.0		DHSS	20															
JUL 15	11:45	21.0	8.03		18.0	M	DHSS	18		282													
JUL 15	11:50	21.0	8.36		20.0	M	DHSS	23		272													
JUL 15	11:55	21.0	7.48		23.0	M	DHSS	21		274													
JUL 15	12:00	21.0	6.48		25.0	M	DHSS	23		266													
JUL 15	12:05	21.0	7.86		30.0	M	DHSS	26		268													
JUL 15	12:10	21.0	38.1		9.0		DHSS	27		271													
JUL 17	18:30	22.0	40.3		9.0		DHSS	21															
JUL 19	18:00	23.5	40.1		9.0		DHSS	20		270													
JUL 27	17:30	23.0	26.0		9.0		DHSS	17															
JUL 30	17:00	22.0	12.0		9.0		DHSS	16		320													
AUG 05	16:00	22.0	21.1		9.0		DHSS	35															
AUG 07	17:00	22.5	33.9		9.0		DHSS	29		207													
AUG 10	17:30	20.0	26.8		9.0		DHSS	20															
AUG 12	10:30	17.0	24.0		9.0		DHSS	22		228													
AUG 26	12:50	16.0	30.8		9.0		DHSS	23		253													
SEP 10	11:00	15.0	7.50		18.0	M	DHSS	17		267													
SEP 10	11:03	15.0	7.80		20.0	M	DHSS	20		265													
SEP 10	11:06	15.0	6.91		23.0	M	DHSS	22		270													
SEP 10	11:09	15.0	7.14		26.0	M	DHSS	21		265													
SEP 10	11:12	15.0	6.15		31.5	M	DHSS	21		260													
SEP 10	11:15	15.0	35.6		9.0		DHSS	18		260													
OCT 10	13:30	4.0	13.6		9.0		DHSS	14		280													
NOV 04	14:00	5.0	13.3		9.0		DHSS	13		307													

NOTE : SINGLE VERTICAL LOCATED AT 9.0 METRES FOR 1985

DISCHARGE SYMBOL(S). B - ICE CONDITIONS
CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT A - CLASSIFIED AS AN ANOMALY
VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL M - A SEDIMENT MEASUREMENT VERTICAL

MANITOBA

ROSEAU RIVER AT GARDENTON - STATION NO. 05OD004

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY : MAR-OCT MEAN LOAD (TONNES)	SUMMARY : MAR-OCT HISTORICAL MEAN LOAD (TONNES)	SUMMARY : MAR-OCT STANDARD ERROR OF MEAN %
1972	-------CCCC-	MANUAL	22	AUG 12	2	NOV 02	4.17	AUG 13	68.9	---	---	---
1973	---CCCCCCC--	MANUAL	48	OCT 02	1	JUN 16 *	87.9	OCT 02	2 030	---	---	---
1974	---PCCCCCCC-	MANUAL	322	MAY 20 *	5	OCT 08	2 450	MAY 20 *	33 400 *	---	---	---
1975	---CCCCCCCP-	MANUAL	217	APR 22	3	SEP 19	862	MAY 05	20 900	---	---	---
1976	--CCCCCCCC--	MANUAL	240	APR 06	7	AUG 11	728	APR 08	7 320	29.9	29.9	---
1977	--CCCCCCCC--	MANUAL	228	MAY 19	2	MAY 12	42.4	MAY 31	876	3.98	16.9	76.7
1978	--CCCCCCCC--	MANUAL	186	APR 18	5	OCT 05	783	APR 18	10 600	43.1	25.7	44.7
1979	--CCCCCCCC--	MANUAL	197	APR 21	5	JUL 04	654	APR 21	13 700	56.0	33.2	33.5
1980	--CCCCCCCC--	MANUAL	122	APR 13	5	OCT 20	314	APR 14	2 110	8.59	28.3	35.1
1981	--CCCCCCCC--	MANUAL	31	JUN 16	6	MAR 25	45.7	JUL 04	1 540	6.27	24.6	36.2
1982	--CCCCCCCC--	MANUAL	73	APR 17	5	JUN 27	250	APR 15	7 020	28.7	25.2	29.9
1983	--CCCCCCCC--	MANUAL	87	APR 08	4	JUN 11	390	APR 08	6 860	28.0	25.6	25.5
1984	-PCCCCCCCC--	MANUAL	172	APR 04	3	JUN 02	584	APR 04	7 230	29.5	26.0	22.2
1985	--CCCCCCCCP-	MANUAL	193	APR 03	12	MAY 06	262	APR 04	12 400	50.5	28.5	20.1

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

ROSEAU RIVER NEAR DOMINION CITY - STATION NO. 05OD001

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 49 11 53 N LONG 97 03 15 W
DRAINAGE AREA: 5 200 km²
TYPE OF FLOW: NATURAL
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 30 900 TONNES FOR THE PERIOD JAN 01 TO DEC 31

REMARKS:

	JAN			FEB			MAR			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	0.457 B	8	0.24	0.234 B	8	0.15	0.210 B	22	0.40	1
2	0.438 B	8	0.33	0.209 B	8	0.14	0.214 B	23	0.43	2
3	0.404 B	8	0.21	0.195 B	9	0.15	0.214 B	22	0.41	3
4	0.389 B	8	0.20	0.181 B	9	0.14	0.219 B	22	0.42	4
5	0.378 B	8	0.20	0.170 B	9 S	0.13	0.221 B	23	0.44	5
6	0.389 B	8	0.19	0.186 B	9	0.13	0.217 B	24	0.45	6
7	0.359 B	8	0.19	0.159 B	10	0.14	0.208 B	23	0.41	7
8	0.351 B	8	0.18	0.150 B	10	0.13	0.198 B	24 S	0.41	8
9	0.334 B	8	0.17	0.148 B	10	0.13	0.194 B	25	0.42	9
10	0.316 B	8	0.18	0.140 B	9	0.11	0.195 B	25	0.44	10
11	0.311 B	8	0.18	0.142 B	10	0.12	0.191 B	26	0.43	11
12	0.302 B	8	0.18	0.156 B	11	0.15	0.197 B	27	0.48	12
13	0.308 B	8	0.18	0.176 B	12	0.18	0.230 B	28	0.58	13
14	0.326 B	8	0.17	0.182 B	12	0.20	0.236 B	28	0.57	14
15	0.326 B	8 S	0.17	0.201 B	12	0.21	0.235 B	29	0.58	15
16	0.327 B	8	0.17	0.214 B	13	0.24	0.236 B	30	0.61	16
17	0.330 B	8	0.17	0.227 B	13	0.24	0.251 B	33	0.72	17
18	0.330 B	8	0.17	0.235 B	14	0.28	0.242 B	38	0.79	18
19	0.314 B	8	0.16	0.226 B	16	0.31	1.85 B	70	11.2	19
20	0.306 B	8	0.16	0.224 B	17	0.33	2.02 B	107	18.7	20
21	0.309 B	8	0.16	0.224 B	18	0.35	2.31 B	118	23.6	21
22	0.316 B	8	0.16	0.223 B	18	0.35	3.20 B	141 S	26.8	22
23	0.322 B	8	0.17	0.220 B	18	0.34	4.80 B	151	83.9	23
24	0.328 B	8	0.17	0.214 B	19	0.35	4.69 B	88	35.7	24
25	0.326 B	8	0.17	0.211 B	19	0.35	8.78 B	80	29.2	25
26	0.311 B	8	0.16	0.212 B	20	0.37	5.88 B	35 S	17.8	26
27	0.296 B	8	0.15	0.209 B	21	0.38	8.22 B	29 S	16.6	27
28	0.283 B	7	0.17	0.205 B	22	0.39	8.29 B	28 S	20.1	28
29	0.283 B	7	0.16				10.4 B	27 S	24.3	29
30	0.250 B	7	0.15				9.89 B	32 S	27.3	30
31	0.237 B	8	0.16				12.8 B	43 S	47.8	31
TOTAL	10.214		5.40	5.450		6.49	82.108		370.73	TOTAL

	APR			MAY			JUN			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	13.9 B	47 S	56.4	19.2	54 S	89.8	30.4	46 S	121	1
2	15.8 B	103 S	141	18.3	91 S	80.6	29.8	46 S	118	2
3	19.3 B	143 S	238	17.4	49 S	73.7	27.0	41 S	103	3
4	41.9 B	208 S	757	16.7 A	48 S	69.3	26.6	42 S	105	4
5	64.6	278	1 320	16.2	53 S	74.2	28.6	40 S	99.5	5
6	38.7	217 S	688	15.7	84 S	86.8	28.7	41 S	102	6
7	34.4	172 S	511	15.8	56	76.4	28.7	45 S	112	7
8	33.8	147 S	427	15.5	52 S	69.6	28.0	45 S	109	8
9	33.0	131 S	374	14.7	43 S	53.3	29.3	44 S	111	9
10	32.8	129 S	366	14.1	97 S	118	29.0	42 S	105	10
11	32.1	111 S	308	15.8	201 S	274	29.0	41 S	103	11
12	31.0	110 S	295	13.9	52	58.0	28.7	39 S	96.7	12
13	28.9	107 S	274	13.5	39	42.1	28.2	38 S	92.6	13
14	28.1	94 S	228	13.5	44 S	51.3	27.8	42 S	100	14
15	28.4	88 S	201	14.4	66	103	27.1	39 S	91.3	15
16	25.8	95 S	215	22.0	88 S	188	26.5	37 S	84.7	16
17	26.1	126 S	282	23.7	113	231	25.1	34 S	73.7	17
18	26.0	117 S	263	24.8	113	242	23.3	30 S	60.4	18
19	25.7	107 S	238	25.8	112	250	20.6	28 S	52.1	19
20	25.3	91 S	199	26.7	101 S	233	18.6	27	43.8	20
21	24.2	88 S	184	27.5	90	214	17.0	26 S	38.2	21
22	22.6	78 S	154	28.1	78	192	16.7	24	33.6	22
23	20.8	86 S	153	28.6	86	188	13.7	23 S	27.2	23
24	19.6	81 S	103	29.1	83	188	13.8	25 S	27.8	24
25	20.1	83 S	144	29.6	81	188	13.8	26 S	33.4	25
26	20.5	80 S	106	29.8	81	188	14.5	25 S	31.3	26
27	20.6	84 S	114	29.6	80 S	185	15.8	26 S	38.2	27
28	20.7	84 S	114	29.8	84 S	186	21.2	49	89.6	28
29	20.5	71 S	126	29.9	86 S	146	24.8	82	186	29
30	19.9	87 S	98.0	30.1	85 S	143	27.3	76 S	179	30
31				30.5	50 S	132				31
TOTAL	801.8		8 838.4	682.8		4 247.8	733.1		2 585.5	TOTAL

A - MANUAL GAUGE B - ICE CONDITIONS S - SAMPLE(S) COLLECTED THIS DAY

MANITOBA

ROSEAU RIVER NEAR DOMINION CITY - STATION NO. 05OD001

SUSPENDED SEDIMENT FOR 1985

DAY	JUL DAILY DISCHARGE (m^3/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m^3/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	DAY
1	28.2	68 S	165	9.27	46 S	36.0	23.2	46	132	1
2	28.9	64 S	160	7.57	35	22.9	33.4	45 S	130	2
3	29.5	58 S	148	8.34	28 S	14.0	34.5	49	146	3
4	30.2	53	138	8.23	29	18.6	36.5	56	177	4
5	30.5	49 S	129	10.9	64 S	60.3	39.4	58 S	197	5
6	30.8	46 S	133	19.4	89	149	40.7	61	215	6
7	31.3	43	116	21.7	87 S	126	40.4	80 S	209	7
8	32.0	41 S	113	23.7	68 S	116	39.5	50	171	8
9	32.7	56 S	158	34.2	68 S	121	38.6	44 S	147	9
10	33.3	67 S	193	26.1	68 S	126	37.6	48 S	157	10
11	34.0	67	197	25.7	56	124	37.4	51	165	11
12	34.9	66	199	26.6	61 S	118	37.4	46	155	12
13	35.6	66 S	204	27.7	45	108	38.0	44	144	13
14	36.7	65	205	27.4	46 S	106	38.5	39 S	130	14
15	37.4	65 S	210	26.6	44	101	39.0	37	125	15
16	38.3	65	215	25.9	43	98.2	40.0	41	142	16
17	39.6	65	222	26.5	44 S	101	40.6	44 S	155	17
18	40.3	65	226	28.4	42	98.6	41.3	48	171	18
19	40.4	64	223	28.8	37 S	86.7	41.6	50	181	19
20	40.3	62	216	26.6	41	93.9	41.8	46	166	20
21	40.1	59 S	204	26.7	50 S	115	41.4	40 S	143	21
22	39.4	52 S	177	26.8	54	126	41.0	35	128	22
23	36.5	54	180	26.6	56	143	40.5	33	115	23
24	37.3	60 S	193	31.5	59 S	181	39.4	30 S	102	24
25	35.6	59	181	32.5	56	157	38.0	31	102	25
26	33.1	50	143	32.3	51 S	142	36.8	32	102	26
27	29.7	45 S	115	31.6	45	124	35.4	32 S	97.8	27
28	24.6	44	93 S	31.6	43	117	34.1	31	91.3	28
29	19.0	44 S	72.2	31.3	42 S	114	32.3	29	80.8	29
30	14.7	41 S	53.1	31.2	48	129	30.3	27 S	70.7	30
31	11.8	44	44.1	31.8	50 S	137				31
TOTAL	1 005.8		5 016.8	755.41		3 278.4	1 139.3		4 247.8	TOTAL

DAY	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DEC DAILY DISCHARGE (m^3/s)	DEC MEAN CONCENTRATION (mg/L)	DEC DAILY LOAD (t)	DAY
1	27.7	26	62.3	16.2	22	30.6	2.49 B	14	3.01	1
2	28.1	27	66.6	15.4	22	29.3	2.43 B	13	2.73	2
3	22.7	26 S	51.0	14.6	22	27.8	2.39 B	12	2.48	3
4	20.6	24	42.7	14.0	22	26.6	2.31 B	11 S	2.20	4
5	18.9	30 S	32.7	13.4	22	26.5	2.28 B	10	1.98	5
6	17.5	21	31.8	12.7	22	24.1	2.27 B	10	1.96	6
7	16.4	25	35.4	11.7	20	20.2	2.27 B	10	1.96	7
8	16.6	26	37.3	11.1 B	22	22.1	2.25 B	8	1.56	8
9	16.0	28 S	40.1	10.3 B	24	24.9	2.24 B	7	1.35	9
10	15.8	31	42.3	9.41 B	30	24.4	2.21 B	6	1.15	10
11	16.3	34	47.8	8.82 B	30	22.8	2.12 B	8 S	1.10	11
12	17.8	36	55.7	8.56 B	32	24.4	2.20 B	8	1.14	12
13	21.9	38	71.9	10.0 B	32	27.4	2.62 B	8	1.31	13
14	25.2	39 S	84.9	9.41 B	32	25.0	2.37 B	8	1.16	14
15	27.0	39	91.0	8.63 B	30	22.1	2.06 B	8	1.06	15
16	28.1	39	94.7	7.47 B	30	19.4	1.87 B	8	1.02	16
17	28.8	37 S	92.1	6.43 B	29	18.1	1.88 B	8	0.98	17
18	29.6	36	92.1	5.41 B	28	13.1	1.80 B	7	1.08	18
19	30.1	36	93.6	4.76 B	27	11.2	1.73 B	7	1.05	19
20	30.1	39	101	4.22 B	28	8.48	1.87 B	7	1.01	20
21	29.6	40	102	3.76 B	25	6.13	1.82 B	7	0.98	21
22	28.8	41 S	102	3.84 B	24	7.34	1.69 B	7	0.96	22
23	28.1	41	99.5	3.39 B	23	6.44	1.81 B	7	0.97	23
24	27.0	38	88.6	3.25 B	21	5.80	1.85 B	7	0.94	24
25	25.4	33	72.4	3.18 B	20	5.50	1.48 B	7	0.80	25
26	23.9	30 S	61.8	3.11 B	20	5.37	1.50 B	7	0.91	26
27	22.2	27	51.8	2.97 B	18	4.88	1.48 B	7	0.90	27
28	20.7	24 S	43.8	2.83 B	18	4.66	1.48 B	7	0.90	28
29	19.6	26	42.3	2.68 B	18	4.18	1.45 B	7	0.88	29
30	18.2	24	37.7	2.56 B	18	3.94	1.45 B	7	0.88	30
31	17.0	23	33.6				1.42 B	8	0.98	31
TOTAL	712.8		1 999.1	234.72		805.90	80.02		41.62	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

ROSEAU RIVER NEAR DOMINION CITY - STATION NO. 05DD001

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (C)	INSTANT. DISCHARGE (m^3/s)		SINGLE VERTICAL SAMPLING (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
JAN 15	13:15	0.5	0.321	B	5.5	Z	DH48	6		472														
FEB 05	11:30	0.5	0.168	B	4.7	Z	DH48	9		476														
MAR 08	10:30	0.5	0.196	B	4.5	Z	DH48	24		424														
MAR 22	13:20	0.5	2.20	W	85.0		DH59	141		202														
MAR 26	15:30	-1.0	5.88	W	85.0		DH59	38																
MAR 27	08:45	-1.0	6.22	W	85.0		DH59	28																
MAR 28	09:10	-1.0	8.29	W	85.0		DH59	28																
MAR 29	08:45	-1.0	10.4	W	85.0		DH59	25																
MAR 30	09:45	-1.0	9.88	W	85.0		DH59	32		152														
MAR 31	09:30	-1.0	12.8	W	85.0		DH59	44																
APR 1	08:30	-0.5	13.9	W	85.0		DH59	43		150														
APR 02	08:45	-1.0	15.6	W	85.0		DH59	102																
APR 02	12:00	0.5	15.6	W	85.0		DH59	110																
APR 03	08:45	-1.0	19.3	W	85.0		DH59	140																
APR 04	08:00	-1.0	41.9	W	85.0		DH59	182																
APR 06	09:30	1.0	38.6		85.0		DH59	223																
APR 07	08:30	1.0	34.4		85.0		DH59	178		188														
APR 08	08:45	0.0	33.6		85.0		DH59	150																
APR 09	08:15	1.0	33.0		85.0		DH59	131																
APR 10	08:45	2.0	32.6		85.0		DH59	131																
APR 11	08:30	3.0	32.2		85.0		DH59	110																
APR 12	08:30	1.0	31.2		85.0		DH59	111																
APR 13	08:45	5.0	29.7		85.0		DH59	106																
APR 14	08:15	2.0	28.3		85.0		DH59	93		190														
APR 15	08:30	3.0	26.8		85.0		DH59	91																
APR 16	08:40	4.0	26.4		85.0		DH59	89																
APR 16	08:45	6.0	25.9		85.0		DH59	92																
APR 17	08:45	6.0	26.1		85.0		DH59	127																
APR 18	08:45	7.0	26.1		85.0		DH59	117																
APR 19	09:00	9.0	25.7		85.0		DH59	106																
APR 20	10:30	11.0	25.3		85.0		DH59	86																
APR 21	09:30	12.0	24.4		85.0		DH59	89		226														
APR 22	08:00	11.0	23.0		85.0		DH59	79																
APR 23	08:00	11.0	21.2		85.0		DH59	72																
APR 24	08:45	11.0	19.7		85.0		DH59	61																
APR 25	09:00	11.0	20.1		85.0		DH59	86																
APR 26	08:45	9.0	20.8		85.0		DH59	58																
APR 27	08:45	9.0	20.6		85.0		DH59	66																
APR 28	09:45	10.0	20.7		85.0		DH59	59		240														
APR 29	08:30	13.0	20.6		85.0		DH59	73																
APR 30	13:30	15.0	20.0		85.0		DH59	52																
MAY 1	08:45	12.0	19.3		85.0		DH59	56																
MAY 2	08:30	13.0	18.5		85.0		DH59	45																
MAY 3	08:20	14.0	17.8		85.0		DH59	46																
MAY 4	10:30	10.0	18.7	V	85.0		DH59	44																
MAY 5	08:45	14.0	18.2		85.0		DH59	48		239														
MAY 6	08:30	14.0	15.8		85.0		DH59	66																
MAY 8	08:30	14.0	15.6		85.0		DH59	61																
MAY 9	08:45	15.0	14.8		85.0		DH59	39																
MAY 10	08:30	16.0	13.8		85.0		DH59	162	C															
MAY 11	09:30	15.0	16.3		85.0		DH59	334		236	61	73	80	85	90	93	97	99	100			7	20	73
MAY 14	08:45	12.0	12.9		85.0		DH59	38																
MAY 15	09:00	11.0	21.8		85.0		DH59	85		253														
MAY 16	19:01	11.0	21.8		85.0		DH59	5770	C	259														
MAY 20	10:00	12.0	26.8		85.0		DH59	101																
MAY 27	10:00	17.0	3.63		15.0	M	DH59	47		259														
MAY 27	10:05	17.0	5.56		15.0	M	DH59	54		257														
MAY 27	10:10	17.0	6.20		20.0	M	DH59	59		266														
MAY 27	10:15	17.0	7.26		22.0	M	DH59	70		266														
MAY 27	10:20	17.0	8.12		25.0	M	DH59	80		255														
MAY 27	10:25	17.0	28.8		85.0		DH59	59		257														
MAY 28	08:15	16.0	28.9		85.0		DH59	86																
MAY 29	08:30	16.0	28.8		85.0		DH59	53																
MAY 30	09:15	16.0	30.0		85.0		DH59	57																
MAY 31	08:30	14.0	30.5		85.0		DH59	90																
JUN 01	08:30	15.0	30.6		85.0		DH59	44																
JUN 02	12:15	14.0	29.6		85.0		DH59	41																
JUN 03	09:10	13.0	29.0		85.0		DH59	36																
JUN 04	08:30	13.0	28.8		85.0		DH59	45		268														
JUN 05	09:00	12.0	28.8		85.0		DH59	42																
JUN 06	09:00	14.0	28.7		85.0		DH59	42																
JUN 06	14:00	17.0	28.8		85.0		DH59	41																
JUN 07	09:15	15.0	28.7		85.0		DH59	44																
JUN 08	10:10	15.0	29.1		85.0		DH59	46																
JUN 08	11:30	15.0	29.4		85.0		DH59	44																
JUN 10	09:30	15.0	29.1		85.0		DH59	43																
JUN 11	09:30	15.0	29.0		85.0		DH59	41		266														
JUN 12	09:15	15.0	28.8		85.0		DH59	38																
JUN 13	09:15	15.0	28.3		85.0		DH59	37																
JUN 14	09:10	17.0	27.7		85.0		DH59	44																
JUN 15	08:30	17.0	27.3		85.0		DH59	36																
JUN 16	08:30	17.0	26.7		85.0		DH59	38																
JUN 17	09:15	17.0	25.3		85.0		DH59	34																
JUN 18	09:00	16.0	23.7		85.0		DH59	31		275														
JUN 19	09:15	17.0	21.1		85.0		DH59	29																
JUN 21	09:30	18.0	17.1		85.0		DH59	25																
JUN 23	08:50	14.0	13.9		85.0		DH59	23		280														
JUN 24	09:10	15.0	13.8		85.0		DH59	25																
JUN 25	09:30	15.0	13.8		85.0		DH59	29																
JUN 26	09:05	15.0	14.8		85.0		DH59	26																
JUN 27	09:30	15.0	15.3		85.0		DH59	28																
JUN 28	09:35	14.0	20.8		85.0		DH59	41																
JUN 30	11:15	16.0	27.3		85.0		DH59	76																
JUL 1	10:10	18.0	28.1		85.0		DH59	89																
JUL 2	08:15	18.0	28.9		85.0		DH59	85		219														
JUL 3	09:10	20.0	29.5		85.0		DH59	58																
JUL 5	08:20	20.0	30.5		85.0		DH59	50																
JUL 6	08:25	22.0	30.9		85.0		DH59	47																
JUL 8	09:15	23.0	32.0		85.0		DH59	41																

NOTE : SINGLE VERTICAL LOCATED AT 85.0 METRES FOR 1985

DISCHARGE SYMBOL(S): B - ICE CONDITIONS V - DAILY MEAN; MANUAL GAUGE W - DAILY MEAN; ICE CONDITIONS
CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT
VERTICAL SYMBOL(S): M - A SEDIMENT MEASUREMENT VERTICAL
Z - A SEDIMENT MEASUREMENT VERTICAL NOT AT THE REGULAR MEASUREMENT CROSS-SECTION

CONTINUED

MANITOBA

ROSEAU RIVER NEAR DOMINION CITY - STATION NO. 05OD001 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)	SINGLE VERTICAL SAMPLING (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
JUL 8	11:00	24.0	8.77	18.0	M	DH59	50		255														
JUL 8	11:05	24.0	8.47	18.5	M	DH59	57		252														
JUL 8	11:10	24.0	7.39	20.0	M	DH59	58		248														
JUL 8	11:15	24.0	6.88	23.0	M	DH59	1480	C	263														
JUL 8	11:20	24.0	3.85	26.0	M	DH59	58		263														
JUL 8	11:25	24.0	33.3	85.0		DH59	55		258														
JUL 10	09:15	22.0	33.3	85.0		DH59	88	C															
JUL 13	15:30	23.0	35.8	85.0		DH59	86																
JUL 15	08:45	20.0	37.3	85.0		DH59	85		270														
JUL 21	11:15	19.0	40.2	85.0		DH59	80																
JUL 22	09:50	19.0	39.5	85.0		DH59	81		282														
JUL 24	09:00	18.0	37.4	85.0		DH59	80																
JUL 27	10:15	19.0	30.1	85.0		DH59	85																
JUL 30	08:30	18.0	15.2	85.0		DH59	41		291														
AUG 1	09:45	19.0	9.44	85.0		DH59	48																
AUG 3	10:30	21.0	8.28	85.0		DH59	28																
AUG 5	10:15	20.0	9.40	85.0		DH59	58																
AUG 7	09:40	19.0	21.6	85.0		DH59	84		311														
AUG 8	10:00	21.0	3.76	18.0	M	DH59	41		218														
AUG 8	10:05	21.0	5.58	18.5	M	DH59	51		218														
AUG 8	10:10	21.0	5.84	20.5	M	DH59	62		215														
AUG 8	10:15	21.0	8.25	23.0	M	DH59	73		220														
AUG 8	10:20	21.0	2.08	26.0	M	DH59	78		211														
AUG 8	10:25	21.0	23.5	85.0		DH59	80		206														
AUG 9	09:15	20.0	24.0	85.0		DH59	56																
AUG 10	11:45	18.0	25.1	85.0		DH59	57																
AUG 12	08:48	12.0	26.5	85.0		DH59	53																
AUG 14	09:15	14.0	27.5	85.0		DH59	44		235														
AUG 17	11:00	14.0	26.5	85.0		DH59	44																
AUG 19	08:45	13.0	26.5	85.0		DH59	37																
AUG 21	10:00	14.0	28.7	85.0		DH59	50		267														
AUG 24	10:30	11.0	31.7	85.0		DH59	60																
AUG 26	09:50	12.0	32.4	85.0		DH59	52		252														
AUG 26	10:00	16.0	32.4	85.0		DH59	51		255														
AUG 29	10:10	14.0	31.3	85.0		DH59	42																
AUG 31	09:30	17.0	31.7	85.0		DH59	51																
SEP 2	10:30	15.0	33.3	85.0		DH59	45		264														
SEP 5	08:45	14.0	38.1	85.0		DH59	59																
SEP 7	09:35	14.0	40.5	85.0		DH59	61																
SEP 8	11:15	14.5	8.97	18.5	M	DH59	33		262														
SEP 8	11:18	14.5	8.21	19.0	M	DH59	39		250														
SEP 8	11:21	14.5	7.01	21.0	M	DH59	46		252														
SEP 8	11:24	14.5	8.35	23.0	M	DH59	59		252														
SEP 8	11:27	14.5	4.74	26.0	M	DH59	46		259														
SEP 8	11:30	14.5	37.3	85.0		DH59	44		265														
SEP 10	09:00	13.0	37.8	85.0		DH59	47																
SEP 14	11:45	12.0	38.5	85.0		DH59	39		265														
SEP 17	09:15	9.0	40.7	85.0		DH59	44																
SEP 21	12:50	10.0	41.4	85.0		DH59	40		269														
SEP 24	09:45	8.0	39.5	85.0		DH59	30																
SEP 27	09:45	7.0	35.5	85.0		DH59	33																
SEP 30	09:50	5.0	30.5	85.0		DH59	27		267														
OCT 3	09:30	6.0	23.0	85.0		DH59	27																
OCT 5	11:45	7.0	18.8	85.0		DH59	20		286														
OCT 9	09:45	1.0	15.1	85.0		DH59	28																
OCT 14	11:45	5.0	25.4	85.0		DH59	40		292														
OCT 17	09:30	3.0	28.7	85.0		DH59	38																
OCT 22	09:00	7.0	28.8	85.0		DH59	41		289														
OCT 26	10:30	7.0	24.0	85.0		DH59	30																
OCT 28	11:03	6.0	2.18	15.0	M	DH59	17		295														
OCT 28	11:09	6.0	4.81	18.0	M	DH59	20		289														
OCT 28	11:13	6.0	4.74	20.0	M	DH59	23		288														
OCT 28	11:18	6.0	5.57	22.0	M	DH59	32		286														
OCT 28	11:21	6.0	3.36	25.0	M	DH59	23		283														
OCT 28	12:03	6.0	20.7	85.0		DH59	24		297														
DEC 4	12:00	0.5	2.31	B 5.0	Z	DH59	12		263														
DEC 11	13:15	0.5	2.12	B 5.0	Z	DH59	5		284														

NOTE : SINGLE VERTICAL LOCATED AT 85.0 METRES FOR 1985

DISCHARGE SYMBOL(S): B - ICE CONDITIONS
CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT
VERTICAL SYMBOL(S): M - A SEDIMENT MEASUREMENT VERTICAL
Z - A SEDIMENT MEASUREMENT VERTICAL NOT AT THE REGULAR MEASUREMENT CROSS-SECTION

ROSEAU RIVER NEAR DOMINION CITY - STATION NO. 05OD001

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY - MAR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	HISTORICAL STANDARD ERROR OF MEAN %
1972	-------CCCC-	MANUAL	103	SEP 06	6	OCT 27 *	8.89	AUG 14	224	---	---	---
1973	---CCCCCCC--	MANUAL	118	OCT 10	10	APR 23	329	SEP 30	3 980	---	---	---
1974	---PCCCCCCCC	MANUAL	328	APR 18	6	OCT 30	1 960	APR 18	48 800	---	---	---
1975	---PCCCCCC--	MANUAL	314	APR 23	12	OCT 03	1 850	MAY 05	48 100 *	---	---	---
1976	--CCCCCCC--	MANUAL	514	APR 07	16	OCT 08	1 870	APR 07	13 400	54.8	54.8	---
1977	--CCCCCCC--	MANUAL	188	APR 11	10	MAR 18	194	APR 12	1 610	5.87	30.7	78.8
1978	--CCCCCCC--	MANUAL	331	APR 18	6	OCT 14	1 410	APR 18	25 500	104	55.1	51.0
1979	CCCCCCCCCCC	MANUAL	297	APR 20	10	OCT 29	1 840	APR 21	37 100	151	79.1	39.4
1980	CCCCCCCCCCC	MANUAL	288	APR 14	8	OCT 26	998	APR 14	5 990	24.2	68.1	38.9
1981	CCCCCCCCCCC	MANUAL	58	JUL 20	6	OCT 02	78.6	JUL 05	3 810	13.6	59.0	39.6
1982	CCCCCCCCCCC	MANUAL	398	OCT 09	6	MAR 11	722	APR 18	21 700	85.4	82.8	32.2
1983	CCCCCCCCCCC	MANUAL	350	APR 09	6	DEC 05	2 920	APR 08 *	24 400	96.7	87.3	26.6
1984	CCCCCCCCCCC	MANUAL	510	MAY 11	8	FEB 28	988	APR 05	12 700	50.1	65.4	24.5
1985	CCCCCCCCCCC	MANUAL	5 770	MAY 15 *	6	JAN 15	1 330	APR 05	30 900	134	71.2	21.8

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

MANITOBA

SASKATCHEWAN RIVER AT THE PAS - STATION NO. 05KJ001

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 53 50 30 N LONG 101 11 10 W
DRAINAGE AREA: 347 000 km²
TYPE OF FLOW: REGULATED
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 2 180 000 TONNES FOR THE PERIOD JAN 01 TO DEC 31

REMARKS:

DAY	JAN DAILY DISCHARGE (m³/s)	JAN MEAN CONCENTRATION (mg/L)	JAN DAILY LOAD (t)	FEB DAILY DISCHARGE (m³/s)	FEB MEAN CONCENTRATION (mg/L)	FEB DAILY LOAD (t)	MAR DAILY DISCHARGE (m³/s)	MAR MEAN CONCENTRATION (mg/L)	MAR DAILY LOAD (t)	DAY
1	281 B	39	947	278 B	44	1 050	305 B	43	1 130	1
2	276 B	38	905	281 B	43	1 040	311 B	42	1 130	2
3	271 B	37	865	283 B	41	1 000	320 B	39	1 080	3
4	266 B	36	834	284 B	39	957	331 B	41	1 170	4
5	272 B	37	870	284 B	39	957	338 B	41	1 200	5
6	277 B	35	838	282 B	38	926	338 B	39	1 140	6
7	276 B	34	811	283 B	38 S	929	337 B	40	1 160	7
8	273 B	33 S	778	284 B	38	932	336 B	39 S	1 130	8
9	272 B	34	799	281 B	37	930	335 B	40	1 180	9
10	276 B	37	879	300 B	39	1 010	333 B	41	1 180	10
11	278 B	38	913	305 B	40	1 050	332 B	40	1 150	11
12	282 B	40	975	312 B	41	1 110	333 B	39	1 120	12
13	280 B	42	1 020	322 B	39	1 080	331 B	41	1 170	13
14	283 B	42	1 030	326 B	39	1 100	334 B	41	1 180	14
15	284 B	44	1 080	325 B	40	1 120	343 B	42	1 240	15
16	280 B	47	1 140	327 B	39	1 100	352 B	42	1 280	16
17	274 B	49	1 180	337 B	42	1 220	368 B	44	1 400	17
18	278 B	51	1 220	351 B	43	1 300	382 B	45	1 480	18
19	278 B	52	1 250	353 B	43	1 310	380 B	45	1 480	19
20	281 B	54	1 310	351 B	44	1 330	371 B	44	1 410	20
21	285 B	56 S	1 380	349 B	46	1 390	367 B	43	1 360	21
22	291 B	55	1 380	342 B	46 S	1 380	367 B	45 S	1 430	22
23	292 B	54	1 380	330 B	47	1 340	371 B	44	1 410	23
24	292 B	53	1 340	319 B	47	1 300	379 B	45	1 470	24
25	291 B	52	1 310	306 B	48	1 280	392 B	47	1 590	25
26	288 B	50	1 240	298 B	48	1 240	405 B	48	1 680	26
27	284 B	49	1 200	296 B	46	1 180	417 B	48	1 730	27
28	281 B	50	1 210	299 B	44	1 140	425 B	49 S	1 800	28
29	278 B	47	1 130				436 B	49	1 850	29
30	277 B	46	1 100				447 B	49	1 890	30
31	278 B	46	1 100				438 B	47	1 780	31
TOTAL	8 680		33 396	8 700		31 701	11 254		42 390	TOTAL

DAY	APR DAILY DISCHARGE (m³/s)	APR MEAN CONCENTRATION (mg/L)	APR DAILY LOAD (t)	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	DAY
1	432 B	47	1 750	1 550	287 S	38 400	1 010	122	10 800	1
2	422 B	46	1 680	1 530	265 S	35 000	989	141	11 800	2
3	411 B	45	1 600	1 510	235 S	30 700	931	148 S	12 000	3
4	401 B	46 S	1 590	1 500	230 S	29 800	907	125 S	9 800	4
5	386 B	47	1 610	1 520	252 S	33 100	880	122 S	9 280	5
6	400 B	47	1 620	1 520	234 S	30 700	867	104 S	7 790	6
7	410 B	48	1 700	1 490	243 S	31 300	872	97	7 310	7
8	423 B	49	1 780	1 470	233 S	29 800	893	103 S	7 950	8
9	436 B	51	1 920	1 460	218 S	27 500	939	120	8 740	9
10	451 B	51	1 990	1 450	198 S	24 800	822	159 S	12 700	10
11	480 B	52 S	2 160	1 440	187	23 300	883	218 S	16 500	11
12	532 B	54	2 480	1 450	186	23 300	884	188	14 400	12
13	589 B	58	2 950	1 450	192 S	24 100	902	135 S	10 900	13
14	654 B	67	3 790	1 430	187 S	23 100	907	106 S	8 310	14
15	721 B	78	4 730	1 420	171 S	21 000	924	101	8 080	15
16	810 B	88	6 020	1 440	157 S	19 500	928	109	8 750	16
17	914 B	102	8 050	1 420	152 S	18 800	912	121 S	9 530	17
18	1 020 B	135 S	11 900	1 380	156 S	18 800	913	132 S	10 400	18
19	1 170 B	215	21 700	1 380	155	18 200	878	158	12 000	19
20	1 370 B	301 S	35 600	1 340	164 S	19 000	851	185 S	12 100	20
21	1 540 B	331	44 000	1 280	174 S	19 200	862	153	11 400	21
22	1 720 B	336 S	50 200	1 280	140 S	15 500	893	134 S	10 800	22
23	1 550	388 S	52 000	1 260	132 S	14 400	870	144	10 800	23
24	1 460	379 S	47 800	1 240	136 S	14 800	831	153 S	11 000	24
25	1 500	351 S	45 500	1 200	127 S	13 200	817	138	9 040	25
26	1 530	342 S	45 200	1 170	128 S	12 900	782	100 S	6 780	26
27	1 570	346 S	46 900	1 120	128	12 400	757	108	7 050	27
28	1 570	319	43 300	1 060	116 S	10 600	733	133 S	8 420	28
29	1 550	309 S	41 400	1 050	99 S	8 980	732	137	8 660	29
30	1 540	312 S	41 500	1 040	106 S	9 520	708	127	7 770	30
31				1 030	110 S	9 790				31
TOTAL	27 972		574 430	41 860		680 690	26 156		301 030	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

SASKATCHEWAN RIVER AT THE PAS - STATION NO. 05KJ001

SUSPENDED SEDIMENT FOR 1985

DAY	JUL DAILY DISCHARGE (m^3/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m^3/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	DAY
1	688	113	6 530	418	76 S	2 750	446	71	2 740	1
2	643	97	5 380	406	72	2 530	428	71	2 630	2
3	640	81 S	4 480	402	67	2 330	433	71 S	2 650	3
4	653	79	4 480	404	64	2 280	423	72	2 630	4
5	665	87 S	5 000	398	62	2 120	461	74	2 950	5
6	687	80	5 340	376	60 S	1 950	424	76 S	2 780	6
7	690	88 S	5 130	364	64	1 980	418	80	2 890	7
8	665	100 S	5 750	402	75	2 600	428	86	3 180	8
9	633	97	5 310	470	87 S	3 530	419	92 S	3 330	9
10	645	87	4 850	436	93	3 500	417	98	3 530	10
11	656	88	4 990	415	91	3 280	435	101 S	3 800	11
12	682	96 S	5 680	419	89	3 220	443	93	3 580	12
13	703	98	5 950	431	85	3 170	455	85	3 340	13
14	714	91	5 610	450	82 S	3 190	443	79	3 020	14
15	695	82 S	4 920	451	79	3 080	433	74	2 770	15
16	649	78	4 280	449	76	2 950	420	71 S	2 580	16
17	625	72	3 890	448	74	2 880	398	87	2 300	17
18	614	71	3 770	449	70	2 720	383	84	2 120	18
19	578	75 S	3 750	444	86 S	2 530	417	82	2 230	19
20	549	78	3 750	446	82	2 390	440	84	2 430	20
21	518	81	3 630	451	81 S	2 380	443	87	2 580	21
22	517	84 S	3 780	455	84	2 520	427	74	2 730	22
23	491	84	3 580	442	72 S	2 750	435	81 S	3 040	23
24	487	85 S	3 580	434	75	2 810	414	87	3 110	24
25	482	81	3 370	438	72	2 720	405	94	3 290	25
26	480	78 S	3 230	430	86	2 450	431	101 S	3 780	26
27	481	77	3 270	418	85 S	2 350	441	108	4 120	27
28	469	78	3 080	415	73	2 620	476	115	4 730	28
29	468	78	3 080	432	76 S	2 840	480	122	4 850	29
30	428	78 S	2 880	430	76	2 790	444	131 S	5 030	30
31	423	78	2 850	436	73	2 740				31
TOTAL	18 289		135 030	13 251		83 870	12 940		94 690	TOTAL

DAY	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DEC DAILY DISCHARGE (m^3/s)	DEC MEAN CONCENTRATION (mg/L)	DEC DAILY LOAD (t)	DAY
1	439	129	4 890	374	119 S	3 850	232 B	52	1 040	1
2	446	112	4 320	394	122	4 160	235 B	53	1 080	2
3	441	92	3 510	414	120	4 290	237 B	53	1 090	3
4	420	80 S	2 900	417	116 S	4 180	239 B	52	1 070	4
5	407	78	2 740	408	112	3 930	241 B	52	1 080	5
6	412	77	2 740	388	105	3 500	245 B	53	1 120	6
7	411	77 S	2 730	377	99	3 220	250 B	54	1 170	7
8	413	79	2 820	340	92	2 700	258 B	53	1 180	8
9	421	82	2 980	338 B	85	2 480	268 B	53 S	1 230	9
10	398	84 S	2 890	337 B	78	2 270	280 B	84	1 310	10
11	381	82	2 700	333 B	72	2 070	290 B	84	1 350	11
12	418	82	2 940	330 B	85 S	1 450	295 B	83	1 350	12
13	381	81	2 530	326 B	60	1 890	295 B	83	1 360	13
14	341	80	2 360	321 B	54	1 500	294 B	83	1 350	14
15	382	81 S	2 670	316 B	50	1 370	295 B	82	1 330	15
16	395	82	3 140	308 B	48	1 280	287 B	82	1 330	16
17	429	105	3 890	295 B	50	1 270	288 B	81	1 310	17
18	385	112 S	3 730	288 B	50	1 240	306 B	80	1 320	18
19	379	103	3 370	281 B	50 S	1 210	318 B	80 S	1 370	19
20	414	95	3 400	274 B	51	1 210	326 B	49	1 380	20
21	409	88 S	3 000	285 B	50	1 140	334 B	48	1 380	21
22	421	83	3 020	258 B	52	1 180	384 B	49	1 840	22
23	408	83	2 930	253 B	50	1 050	412 B	47	1 870	23
24	375	87 S	2 820	248 B	51	1 100	438 B	48	1 730	24
25	382	88	2 940	244 B	50	1 050	423 B	44	1 610	25
26	384	83	3 080	240 B	51	1 080	401 B	43	1 480	26
27	386	88	3 270	235 B	52	1 050	384 B	42	1 380	27
28	450	103 S	4 000	231 B	53	1 080	349 B	42	1 270	28
29	387	107	3 580	227 B	53 S	1 040	309 B	41	1 080	29
30	370	110	3 520	228 B	51	1 010	280 B	41	992	30
31	384	114	3 780				278 B	40 S	964	31
TOTAL	12 447		89 200	8 283		60 040	8 489		35 948	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

SASKATCHEWAN RIVER AT THE PAS - STATION NO. 05KJ001

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (C)	INSTANT. DISCHARGE (m^3/s)		SINGLE VERTICAL SAMPLING (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
JAN 08	14:30	0.5	273	B	177		DH59	34	288														
JAN 21	13:00	0.5	285	B	177		DH59	56	285														
FEB 07	13:50	0.5	283	B	177		DH59	38	283														
FEB 22	13:40	0.5	342	B	177		DH59	46	305														
MAR 08	13:20	0.5	336	B	177		DH59	39	297														
MAR 22	13:40	0.5	367	B	177		DH59	45	299														
MAR 26	10:40	0.5	425	B	177		DH59	49	299														
APR 04	09:50	0.5	402	B	177		DH59	46	311														
APR 11	13:35	0.5	480	B	177		DH59	52	304														
APR 18	08:30	1.0	1020	B	---	X	DH59	124	281														
APR 20	14:10	1.0	1370	B	---	X	DH59	314															
APR 22	08:15	1.5	1720		177		D49	330															
APR 23	14:05	2.0	1550		177		D49	400															
APR 24	12:45	4.0	1480		177		D49	377															
APR 25	09:15	3.5	280		82.0	M	D49	407	258														
APR 25	09:20	3.5	300		114	M	D49	400	253														
APR 25	09:25	3.5	301		151	M	D49	365	252														
APR 25	09:30	3.5	1500	M	177		D49	354	253														
APR 25	09:32	3.5	319		184	M	D49	316	257														
APR 25	09:35	3.5	312		226	M	D49	299	258														
APR 26	07:00	3.5	1530		177		D49	338															
APR 27	13:10	5.0	1570		177		D49	349															
APR 29	08:10	5.0	1550		177		D49	308															
APR 30	07:30	5.0	1540		177		D49	318															
MAY 01	08:45	5.0	1550		177		D49	294	226														
MAY 02	14:00	7.0	1530		177		D49	265															
MAY 03	08:30	7.0	1510		177		D49	239															
MAY 04	08:25	8.0	1500		177		D49	224															
MAY 05	09:00	8.5	1520		177		D49	257															
MAY 06	15:40	8.0	1520		177		D49	228															
MAY 07	07:00	8.0	1490		177		D49	246	207														
MAY 08	08:30	8.0	1470		177		D49	236															
MAY 08	07:30	10.0	1480		177		D49	223															
MAY 10	13:20	13.0	1460		177		D49	197															
MAY 13	08:15	13.0	1450		177		D49	192	199														
MAY 14	07:15	10.5	1430		177		D49	192															
MAY 15	07:05	8.5	1420		177		D49	175															
MAY 16	08:00	10.0	1440		177		D49	158															
MAY 17	13:40	11.5	1420		177		D49	151															
MAY 18	10:15	12.0	1380		177		D49	155															
MAY 20	07:45	13.0	1340		177		D49	158	211														
MAY 21	07:00	13.0	1280		177		D49	186															
MAY 22	07:10	14.0	1280		177		D49	142															
MAY 23	07:15	15.0	1260		177		D49	132															
MAY 24	12:50	15.0	1240		177		D49	137															
MAY 25	13:20	16.0	1200		177		D49	124															
MAY 26	14:15	15.0	1170		177		D49	129	218														
MAY 28	10:45	15.0	1080		177		D49	119															
MAY 29	07:00	18.0	1050		177		D49	103															
MAY 30	08:00	14.0	1040		177		D49	106															
MAY 31	07:30	13.0	1030		177		D49	108															
JUN 03	07:30	10.0	931		177		D49	159	217														
JUN 04	07:15	10.0	907		177		D49	122															
JUN 05	13:15	11.0	880		177		D49	124															
JUN 06	07:35	12.0	867		177		D49	106															
JUN 08	11:30	15.0	893		177		D49	102															
JUN 10	11:40	15.0	924		177		D49	148	231														
JUN 11	06:10	13.0	883		177		D49	217															
JUN 13	13:55	16.5	902		177		D49	132															
JUN 14	07:15	17.0	907		177		D49	110															
JUN 17	07:15	17.0	912		177		D49	119	254														
JUN 18	07:30	17.0	913		177		D49	125															
JUN 20	07:10	18.0	851		177		D49	167															
JUN 22	15:30	17.0	893		177		D49	136															
JUN 24	09:25	16.0	155		72.0	M	D49	176	241														
JUN 24	09:30	16.0	157		120	M	D49	170	238														
JUN 24	09:35	16.0	179		154	M	D49	161	238														
JUN 24	09:40	16.0	831	M	177		D49	157	243														
JUN 24	09:45	16.0	182		183	M	D49	145	256														
JUN 24	09:50	16.0	191		219	M	D49	137	284														
JUN 26	07:10	15.0	782		177		D49	100															
JUN 28	07:30	15.0	733		177		D49	132															
JUL 03	07:30	18.0	840		177		D49	82	211														
JUL 05	17:45	20.0	685		177		D49	90															
JUL 07	17:00	25.0	690		177		D49	85															
JUL 08	07:40	24.0	685		177		D49	100															
JUL 12	15:30	23.0	682		177		D49	99	221														
JUL 15	07:15	20.0	695		177		D49	84															
JUL 18	14:45	23.0	578		177		D49	76	240														
JUL 22	09:30	20.0	517		177		D49	85															
JUL 24	08:00	20.0	487		177		D49	85															
JUL 26	07:45	17.0	480		177		D49	79	230														
JUL 30	09:15	17.0	462		177		D49	79															
AUG 01	07:45	18.0	419		177		D49	76															
AUG 06	07:00	22.0	376		177		D49	61	218														
AUG 09	10:00	18.0	470		177		D49	86															
AUG 14	08:40	14.0	450		177		D49	81	219														
AUG 19	07:30	15.0	444		177		D49	67															
AUG 21	07:15	16.0	451		177		D49	61	204														
AUG 23	07:45	15.0	442		177		D49	70															
AUG 27	08:30	16.0	417		177		D49	62															
AUG 29	09:45	16.0	432		177		D49	76	218														
SEP 03	07:40	15.0	433		177		D49	71															
SEP 08	14:30	13.0	424		177		D49	75	204														
SEP 09	07:00	9.0	419		177		D49	82															
SEP 11	09:50	9.0	82.4		78.0	M	D49	112	183														
SEP 11	10:00	9.0	81.0		126	M	D49	109	194														
SEP 11	10:05	9.0	79.5		157	M	D49	100	198														
SEP 11	10:10	9.0	435	M	177		D49	103	200														
SEP 11	10:15	9.0	87.4		183	M	D49	103	196														
SEP 11	10:25	9.0	101		218	M	D49	94	225														
SEP 16	07:15	15.0	420		177		D49	72															
SEP 23	07:45	8.0	436		177		D49	80	213														

NOTE : SINGLE VERTICAL LOCATED AT 177 METRES FOR 1985

DISCHARGE SYMBOL(S): B - ICE CONDITIONS M - DAILY MEAN

VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL M - A SEDIMENT MEASUREMENT VERTICAL

CONTINUED

SASKATCHEWAN RIVER AT THE PAS - STATION NO. 05KJ001 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP.	INSTANT. DISCHARGE		SINGLE SAMPLING VERTICAL		TYPE OF SAMPLER	INSTANT. CONCENT.	DISSOLVED SOLIDS	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES								PERCENT		
										.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	SAND	SILT	CLAY
		(C)	(m³/s)		(m)			(mg/L)	(mg/L)														
SEP 26	14:30	5.0	431		177		D49	102	239														
SEP 30	13:30	5.0	444		177		D49	130															
OCT 04	07:45	5.0	420		177		D49	79															
OCT 07	13:00	5.0	411		177		D49	78	244														
OCT 10	08:00	1.0	398		177		D49	84															
OCT 15	08:00	1.0	382		177		D49	79	224														
OCT 18	11:00	0.5	384		177		D49	113															
OCT 21	15:15	2.0	409		177		D49	85															
OCT 24	10:10	3.0	375		177		D49	87	233														
OCT 28	13:30	2.0	450		177		D49	102															
NOV 01	15:30	0.5	374		177		D49	119	260														
NOV 04	13:30	0.5	417		177		D49	118															
NOV 12	13:50	0.5	330	B	---	X	DH59	65	289														
NOV 18	13:25	0.5	281	B	177		DH59	50	240														
NOV 28	15:20	0.5	227	B	177		DH59	53	285														
DEC 09	14:05	0.5	288	B	177		DH59	53	274														
DEC 19	11:12	0.5	317	B	177		DH59	50	274														
DEC 31	13:25	0.5	279	B	177		DH59	41	265														

NOTE : SINGLE VERTICAL LOCATED AT 177 METRES FOR 1985

DISCHARGE SYMBOL(S): B - ICE CONDITIONS
VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

SASKATCHEWAN RIVER AT THE PAS - STATION NO. 05KJ001

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		SAMPLED CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY . JAN-DEC MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	HISTORICAL STANDARD ERROR OF MEAN %
1954	-----PCCC---	MANUAL	735	SEP 08	55	AUG 15	118 000	SEP 08	3 740 000	---	---	---
1955	----CCCC----	MANUAL	1 130	MAY 05 *	50	JUL 25	183 000	MAY 01 *	3 930 000	---	---	---
1956	----PCCCP---	MANUAL	445	JUN 14	32	JUN 28	100 000	MAY 17	2 170 000	---	---	---
1957	----CCCC----	MANUAL	585	MAY 04	43	AUG 01	128 000	MAY 01	2 850 000	---	---	---
1958	---PCCCCP--	MANUAL	715	APR 23	50	AUG 30	95 000	APR 30	4 400 000	---	---	---
1959	-------CP----	MANUAL	880	JUL 09	115	JUL 30	31 000	JUL 10	1 420 000	---	---	---
1960	----CCCC----	MANUAL	505	JUN 03	55	AUG 12	92 700	MAY 01	2 560 000	---	---	---
1982	----PCCCCCCC	MANUAL	530	MAY 05	16	DEC 07	65 900	MAY 05	3 050 000	---	---	---
1983	CCCCCCCCCCCC	MANUAL	380	APR 28	10	MAR 26	36 400	APR 28	2 340 000	6 400	6 400	---
1984	CCCCCCCCCCCC	MANUAL	560	JUN 30	11	APR 09	78 400	JUN 30	3 280 000	8 980	7 680	15.7
1985	CCCCCCCCCCCC	MANUAL	880	MAY 08	12	MAR 16	98 400	JUL 11	6 690 000 *	18 300	11 200	32.3
1986	CCCCCCCCCCCC	MANUAL	280	MAY 04	10	FEB 24	34 100	MAY 04	2 060 000	5 640	9 830	29.5
1987	CCCCCCCCCCCC	MANUAL	280	JUN 10	10	APR 11	27 100	JUN 10	1 600 000	4 370	8 730	28.7
1988	CCCCCCCCCCCC	MANUAL	189	JUL 01	11	DEC 06	10 700	APR 30	857 000	2 340	7 670	30.1
1989	CCCCCCCCCCCC	MANUAL	511	JUL 09	14	NOV 25	61 000	APR 23	2 850 000	7 810	7 690	25.4
1970	CCCCCCCCCCCC	MANUAL	323	MAY 12	9	MAR 17	55 300	MAY 10	2 130 000	5 850	7 460	22.8
1971	CCCCCCCCCCCC	MANUAL	382	APR 27	12	MAR 17	47 200	APR 27	2 020 000	5 550	7 250	20.9
1972	CCCCCCCCCCCC	MANUAL	586	MAY 03	8	NOV 21 *	95 400	MAY 03	2 740 000	7 490	7 270	18.7
1973	CCCCCCCCCCCC	DUAL	282	MAY 23	12	MAR 31	25 000	MAY 22	1 880 000	5 140	7 080	17.6
1974	CCCCCCCCCCCC	DUAL	853	APR 28	14	DEC 23	173 000	MAY 02	6 230 000	17 100	7 910	17.8
1975	CCCCCCCCCCCC	MANUAL	205	MAY 21	14	APR 05	27 100	APR 30	1 700 000	4 670	7 880	17.2
1976	CCCCCCCCCCCC	MANUAL	143	AUG 30	15	FEB 25	9 590	APR 15	989 000	2 700	7 310	17.4
1977	CCCCCCCCCCCC	MANUAL	188	MAY 07	11	APR 13	11 900	APR 22	871 000	2 390	6 980	17.6
1978	CCCCCCCCCCCC	DUAL	389	MAY 04	10	FEB 22	43 700	MAY 04	1 700 000	4 660	8 840	16.9
1979	CCCCCCCCCCCC	DUAL	417	MAY 08	8	APR 17	72 100	MAY 08	1 640 000	4 490	6 700	16.4
1980	CCCCCCCCCCCC	MANUAL	235	APR 22	10	APR 07	21 300	APR 22	1 380 000	3 800	6 540	16.0
1981	CCCCCCCCCCCC	MANUAL	327	OCT 01	10	DEC 20	21 500	AUG 12	1 750 000	4 800	6 450	15.4
1982	CCCCCCCCCCCC	MANUAL	363	OCT 22	9	APR 18	25 000	APR 30	1 380 000	3 810	6 310	15.1
1983	CCCCCCCCCCCC	MANUAL	221	MAY 12	6	DEC 08	27 400	MAY 01	1 330 000	3 640	6 190	14.8
1984	CCCCCCCCCCCC	MANUAL	284	APR 17	9	MAR 23	28 200	APR 17	1 230 000	3 380	6 080	14.6
1985	CCCCCCCCCCCC	MANUAL	407	APR 25	34	JAN 08	52 000	APR 23	2 160 000	5 910	6 050	13.9

DUAL - MANUAL AND AUTOMATIC SAMPLING MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

MANITOBA

SOURIS RIVER AT WAWANESA - STATION NO. 05NE001

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 49 38 05 N LONG 99 40 55 W
DRAINAGE AREA: 60 400 km²
TYPE OF FLOW: REGULATED
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 21 700 TONNES FOR THE PERIOD JAN 01 TO DEC 31

REMARKS:

DAY	JAN DAILY DISCHARGE (m³/s)	JAN MEAN CONCENTRATION (mg/L)	JAN DAILY LOAD (t)	FEB DAILY DISCHARGE (m³/s)	FEB MEAN CONCENTRATION (mg/L)	FEB DAILY LOAD (t)	MAR DAILY DISCHARGE (m³/s)	MAR MEAN CONCENTRATION (mg/L)	MAR DAILY LOAD (t)	DAY
1	0.718 B	58	3.60	0.253 B	16	0.35	0.207 B	54	0.97	1
2	0.607 B	50	2.62	0.256 B	17	0.38	0.206 B	54	0.98	2
3	0.582 B	45	2.26	0.258 B	18	0.40	0.222 B	54	1.04	3
4	0.587 B	42	2.13	0.263 B	19	0.43	0.254 B	54	1.19	4
5	0.565 B	38	1.90	0.263 B	21	0.48	0.271 B	54	1.26	5
6	0.596 B	36	1.86	0.255 B	23	0.51	0.289 B	54	1.35	6
7	0.629 B	35	1.80	0.251 B	24	0.52	0.284 B	54	1.33	7
8	0.729 B	32	2.02	0.256 B	26	0.58	0.269 B	54	1.26	8
9	0.863 B	28	2.09	0.299 B	26	0.67	0.240 B	54	1.12	9
10	0.824 B	27	1.92	0.290 B	26	0.65	0.236 B	54	1.10	10
11	0.711 B	26	1.60	0.310 B	26	0.70	0.227 B	54	1.06	11
12	0.658 B	24	1.36	0.309 B	26	0.69	0.229 B	54	1.07	12
13	0.540 B	21	0.98	0.273 B	27	0.64	0.232 B	54	1.08	13
14	0.543 B	19	0.89	0.260 B	33	0.74	0.234 B	54	1.09	14
15	0.561 B	17	0.82	0.232 B	41	0.82	0.241 B	54	1.12	15
16	0.510 B	16 S	0.71	0.216 B	46	0.86	0.267 B	55	1.27	16
17	0.473 B	16	0.65	0.208 B	50	0.90	0.854 B	57	4.21	17
18	0.408 B	16	0.56	0.196 B	52	0.88	0.980 B	58 S	4.81	18
19	0.432 B	16	0.60	0.194 B	54 S	0.91	2.84 B	59	14.5	19
20	0.382 B	17	0.56	0.194 B	54	0.91	4.00 B	55	19.0	20
21	0.349 B	17	0.51	0.186 B	54	0.87	10.3 B	52	45.3	21
22	0.337 B	17	0.49	0.188 B	54	0.88	11.7 B	44 S	44.5	22
23	0.319 B	17	0.47	0.184 B	54	0.86	38.4 B	66	219	23
24	0.298 B	17	0.44	0.183 B	54	0.85	80.9 B	142	747	24
25	0.292 B	16	0.40	0.200 B	54	0.93	98.3 B	338	2 870	25
26	0.306 B	16	0.42	0.210 B	54	0.98	135 B	414 S	4 880	26
27	0.276 B	16	0.38	0.226 B	54	1.05	110	232 S	2 200	27
28	0.276 B	16	0.38	0.220 B	54	1.03	88.4	176 S	1 500	28
29	0.277 B	16	0.38				68.1	137 S	818	29
30	0.280 B	16	0.39				70.2	118 S	716	30
31	0.266 B	16	0.37				63.1	124 S	675	31
TOTAL	15 194		35.76	5 633		20.47	779.882		14 757.59	TOTAL

DAY	APR DAILY DISCHARGE (m³/s)	APR MEAN CONCENTRATION (mg/L)	APR DAILY LOAD (t)	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	DAY
1	55.3 B	177 S	846	17.8	19 S	29.2	16.7	17	24.5	1
2	57.3 B	269 S	1 330	17.9	18	27.8	15.4	14	18.6	2
3	52.8 B	156 S	712	16.7	17	24.5	14.9	13 S	16.7	3
4	42.2	116 S	423	16.0	16	22.1	14.6	13	16.4	4
5	35.0	78 S	236	15.6	16 S	21.6	14.1	13	15.8	5
6	31.6	70 S	191	15.6	17	22.9	13.9	14 S	16.8	6
7	28.8	61 S	152	15.7	17	23.1	13.7	14	16.6	7
8	26.1	54 S	122	15.3	16	21.2	13.2	13	14.8	8
9	24.2	57 S	119	15.2	16	21.0	13.3	12 S	13.8	9
10	23.6	55 S	112	15.2	16	21.0	12.6	12	13.1	10
11	21.9	51 S	96.5	16.1	18	25.0	12.7	14 S	15.4	11
12	20.5	48 S	85.0	16.2	18	25.2	12.1	13	13.6	12
13	18.0	46 S	71.5	16.2	16	22.4	12.0	12	12.4	13
14	15.6	42 S	56.6	15.6	13	17.5	12.5	13 S	14.0	14
15	14.2	37 S	45.4	15.3	10 S	13.2	12.6	14	15.2	15
16	12.9	31 S	34.6	15.3	10	13.2	12.6	15 S	16.3	16
17	11.5	26 S	25.8	15.4	11 S	14.6	12.7	15 S	17.6	17
18	10.5	25 S	22.7	15.1	11 S	14.4	11.8	16	16.5	18
19	9.86	25	21.3	14.8	12	15.3	11.3	15	14.6	19
20	9.55	25 S	20.6	14.8	12	15.3	10.7	13 S	12.0	20
21	9.20	21 S	16.7	15.0	12	15.6	10.1	12	10.5	21
22	8.48	19 S	13.9	15.0	12	15.6	8.87	11	8.53	22
23	8.23	16 S	11.4	15.1	12 S	15.7	7.52	10	6.50	23
24	7.98	16 S	11.0	15.6	12	16.2	6.50	10 E	5.62	24
25	7.65	17	11.3	15.4	12	16.4	5.16	8	4.26	25
26	6.76	14	8.18	15.7	11 S	14.9	5.22	7	3.16	26
27	5.77	12	5.98	15.6	11	14.8	4.46	6	2.31	27
28	6.48	12 S	6.72	15.7	12 S	16.3	4.11	5	1.78	28
29	11.3	14	13.7	15.6	11	14.8	3.94	5	1.70	29
30	15.4	17	23.2	16.2	11 S	15.4	3.04	4 S	1.05	30
31				17.6	16	24.3				31
TOTAL	609.07		4 865.08	488.7		590.5	323.52		380.11	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

SOURIS RIVER AT WAWANESA STATION NO. 05NG001

SUSPENDED SEDIMENT FOR 1985

DAY	JUL DAILY DISCHARGE (m^3/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m^3/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	DAY
1	2.23	4	0.77	1.38	9	1.07	7.91	14	9.33	1
2	2.11	6	1.08	1.22	9	0.95	7.84	14	9.48	2
3	2.53	9 S	1.97	1.15	9	0.89	8.08	14 S	9.77	3
4	2.43	9	1.89	1.68	11	1.58	7.88	14 S	10.9	4
5	2.34	9	1.82	2.30	12	2.36	7.83	20	13.0	5
6	2.25	10	1.94	2.43	12	2.82	7.23	20	12.5	6
7	2.27	11	2.16	2.07	11	1.97	7.18	20	12.4	7
8	2.25	11 S	2.14	1.74	10	1.50	6.28	19 S	10.3	8
9	2.11	11	2.01	1.61	10	1.32	5.24	18	8.15	9
10	1.88	10	1.82	1.26	10	1.11	4.34	17	6.37	10
11	1.64	10	1.42	1.19	10	1.03	3.41	15	4.42	11
12	1.48	10	1.28	1.46	11	1.41	3.07	14	3.71	12
13	1.38	9	1.07	1.77	11	1.86	2.81	14 S	3.40	13
14	1.34	9	1.04	1.85	11	1.85	2.68	14	3.22	14
15	1.32	9	1.03	1.88	11	1.88	2.60	14	3.14	15
16	1.28	9 S	1.00	1.90	11	1.81	2.59	14	3.13	16
17	1.35	9	1.05	2.62	13	2.94	2.70	15	3.50	17
18	1.42	9	1.10	3.18	14	3.85	2.78	15 S	3.58	18
19	1.32	9	1.03	2.85	13	3.23	2.78	15	3.60	19
20	1.36	9	1.06	2.74	13	3.08	3.04	15	3.94	20
21	1.24	9	0.96	3.48	14	4.21	3.37	16	4.66	21
22	1.89	9 S	1.47	3.79	14	4.58	3.36	16 S	4.84	22
23	1.76	9	1.37	3.70	13	4.16	3.78	17	5.55	23
24	1.40	8	0.97	3.48	11	3.31	4.31	17	6.33	24
25	1.20	7	0.73	3.08	10	2.66	4.53	16	6.26	25
26	1.35	7	0.82	2.91	10	2.51	4.51	14	5.46	26
27	1.26	7	0.76	3.42	11	3.26	4.27	13 S	4.80	27
28	1.50	8	1.17	4.02	12	4.17	4.22	12	4.38	28
29	2.23	11	2.12	4.37	12	4.53	4.14	11	3.93	29
30	1.90	10	1.64	5.06	12	5.25	4.04	10 S	3.49	30
31	1.63	9	1.27	5.60	13	7.41				31
TOTAL	53.85		41.77	82.24		83.99	136.28		187.34	TOTAL

DAY	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DEC DAILY DISCHARGE (m^3/s)	DEC MEAN CONCENTRATION (mg/L)	DEC DAILY LOAD (t)	DAY
1	3.94	10	3.40	5.31	120 S	55.1	1.84 S	13	2.07	1
2	3.63	10 S	3.14	4.45	115	44.2	1.76 S	13	1.98	2
3	3.47	10	3.00	3.98	113 S	38.5	1.83 S	13 S	2.17	3
4	3.35	11	3.16	3.33	124	35.7	1.76 S	13	1.98	4
5	3.37	12 S	3.49	2.91	136 S	34.2	1.41 S	13	1.58	5
6	3.32	12	3.44	2.83	137	33.5	1.51 S	14	1.83	6
7	3.39	12	3.41	2.36	133	24.9	1.77 S	14	2.14	7
8	3.53	11	3.35	1.89	100	16.3	1.75 S	14	2.12	8
9	3.70	11 S	3.53	1.55	74	9.91	1.76 S	14	2.13	9
10	3.30	11	3.61	1.86 S	48	7.03	1.85 S	14	2.00	10
11	3.91	10	3.38	1.59 S	38	3.67	1.63 S	14	1.85	11
12	3.98	9	3.10	1.56 S	18	2.48	1.39 S	14	1.68	12
13	3.91	8 S	2.70	1.62 S	17	2.38	1.68 S	15	2.15	13
14	3.89	8	2.69	1.66 S	17	2.44	1.76 S	15	2.27	14
15	3.99	8	2.76	1.89 S	18	2.36	1.55 S	15	2.01	15
16	3.99	8	2.76	1.71 S	18	2.38	1.48 S	15	2.05	16
17	4.88	8	3.38	1.67 S	18	2.31	1.73 S	16	2.89	17
18	4.59	8 S	1.88	1.67 S	18	2.03	1.87 S	23	3.12	18
19	3.98	4	1.36	1.64 S	16	2.00	1.52 S	32	4.20	19
20	3.28	4	1.13	1.73 S	18	2.24	1.88 S	38	5.86	20
21	5.07	7	3.07	1.76 S	18	2.12	1.75 S	41	6.20	21
22	7.38	12	7.63	1.76 S	18	2.17	1.84 S	39	6.20	22
23	8.26	14 S	8.99	1.65 S	18	2.26	1.87 S	37	5.34	23
24	8.37	14	10.1	1.76 S	18	2.13	1.61 S	44	5.74	24
25	8.38	15	10.8	1.83 S	18	2.21	1.73 S	66	8.87	25
26	8.23	15	10.7	1.85 S	18	2.24	1.84 S	85	9.21	26
27	7.92	15	10.3	1.78 S	18	2.18	1.90 S	73	10.7	27
28	7.37	15 S	9.55	1.82 S	18	2.30	1.93 S	78	11.8	28
29	7.05	21	12.8	1.67 S	18	2.28	1.68 S	74	8.68	29
30	6.63	79 S	45.3	1.80 S	18	2.30	1.65 S	73	8.78	30
31	6.04	112	58.4				1.61 S	78	11.0	31
TOTAL	156.50		247.54	54.84		345.60	51.23		141.81	TOTAL

S - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

MANITOBA

SOURIS RIVER AT WAWANESA - STATION NO. 05MC001

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE VERTICAL SAMPLING (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002 .004 .008 .016 .031 .062 .125 .250 .500 1.00 2.00	PERCENT SAND	SILT	CLAY
JAN 16	09:50	0.5	0.810	B	MID	X	DH48	16	1070				
FEB 19	11:40	0.5	0.201	B	MID	X	DH48	54	1140				
MAR 18	17:45	0.5	1.65	B	MID	X	DH48	56	994				
MAR 22	14:30	0.5	12.6	B	10RB	X	DH48	42	289				
MAR 26	15:15	0.5	24.6	B	26.0	M	DH59	422	185				
MAR 26	15:25	0.5	29.3	B	30.0	M	DH59	551	153				
MAR 26	15:30	0.5	31.8	B	36.0	M	DH59	405	153				
MAR 26	15:35	0.5	31.0	B	32.0	M	DH59	302	148				
MAR 26	15:40	1.0	25.2	B	60.0	M	DH59	308					
MAR 26	15:50	1.0	136	W	36.0		DH59	396					
MAR 27	09:30	1.0	110	H	36.0		DH59	289					
MAR 27	15:30	1.0	110	H	36.0		DH59	249					
MAR 28	17:30	0.5	98.1	B	WELR	X	DIP	162					
MAR 29	10:15	1.0	69.1	H	36.0		DH59	136					
MAR 30	12:00	1.0	70.2	H	36.0		DH59	114					
MAR 30	19:00	0.5	70.2	H	36.0		DH59	122					
MAR 31	12:00	2.0	63.1	H	36.0		DH59	115					
MAR 31	19:00	0.0	63.1	H	36.0		DH59	138					
APR 01	08:30	0.0	55.2	W	36.0		DH59	160					
APR 01	15:45	1.0	55.2	W	36.0		DH59	206					
APR 02	10:30	2.0	57.2	W	36.0		DH59	285	225				
APR 02	14:00	1.5	56.9	B	36.0		DH59	323					
APR 02	18:30	1.0	57.3	W	36.0		DH59	328					
APR 03	12:15	1.0	50.7	B	36.0		DH59	155					
APR 03	18:30	1.0	48.2	B	36.0		DH59	119					
APR 04	11:30	1.0	41.8		36.0		DH59	116					
APR 04	18:10	2.0	38.8		36.0		DH59	103					
APR 05	11:00	3.0	35.1		36.0		DH59	79					
APR 06	11:30	4.0	31.6		36.0		DH59	66					
APR 06	19:00	2.0	31.1		36.0		DH59	81					
APR 07	12:04	2.0	28.5		36.0		DH59	59					
APR 07	16:15	1.0	28.1		36.0		DH59	57					
APR 08	10:30	1.5	25.2		36.0		DH59	53					
APR 08	16:15	2.0	25.2		36.0		DH59	54	292				
APR 09	12:05	2.0	24.0		36.0		DH59	59					
APR 10	17:25	4.0	23.4		36.0		DH59	55					
APR 11	12:25	4.5	22.0		36.0		DH59	51					
APR 12	12:15	3.5	20.6		36.0		DH59	49					
APR 13	14:15	3.0	17.8		36.0		DH59	46					
APR 14	11:30	3.1	16.5		36.0		DH59	42					
APR 15	11:50	3.0	14.4		36.0		DH59	36	241				
APR 16	12:20	2.5	13.0		36.0		DH59	32					
APR 17	12:15	3.0	11.5		36.0		DH59	28					
APR 18	12:25	2.5	10.6		36.0		DH59	25					
APR 20	12:10	2.5	9.55		36.0		DH59	25					
APR 21	18:20	2.7	9.04		36.0		DH59	20					
APR 22	18:28	3.0	8.39		36.0		DH59	20					
APR 23	19:02	3.0	8.14		36.0		DH59	16	365				
APR 24	11:45	12.0	8.01		36.0		DH59	15					
APR 24	17:00	13.0	8.00		36.0		DH59	17					
APR 25	14:25	16.0	6.43		36.0		DH59	12					
MAY 01	12:15	15.0	17.8		36.0		DH59	19	364				
MAY 05	11:20	14.0	15.5		36.0		DH59	16					
MAY 15	12:10	12.0	15.3		36.0		DH59	10	387				
MAY 17	12:15	13.0	15.4		36.0		DH59	11					
MAY 18	19:10	19.0	14.9		36.0		DH59	12					
MAY 23	14:06	19.0	15.2		36.0		DH59	12	453				
MAY 26	19:10	18.0	15.7		36.0		DH59	11					
MAY 28	12:10	18.0	15.8		36.0		DH59	12					
MAY 30	12:20	17.5	15.9		36.0		DH59	11	526				
JUN 03	17:10	14.5	14.9		36.0		DH59	13					
JUN 06	14:20	16.0	13.5		36.0		DH59	14	603				
JUN 09	16:10	16.5	13.3		36.0		DH59	12					
JUN 11	17:20	16.0	12.8		36.0		DH59	15					
JUN 14	16:30	17.0	12.6		36.0		DH59	13	623				
JUN 16	19:00	13.2	12.6		36.0		DH59	15					
JUN 17	14:45	17.0	2.43		10.0	2	DH48	17	587				
JUN 17	14:50	17.0	2.46		16.0	2	DH48	14	605				
JUN 17	15:00	17.0	2.73		26.0	2	DH48	20	604				
JUN 17	15:05	17.0	2.83		32.0	2	DH48	18	603				
JUN 17	15:10	17.0	2.16		40.0	2	DH48	15	607				
JUN 17	15:25	17.0	12.7		36.0		DH59	16	606				
JUN 20	19:30	21.0	10.5		36.0		DH59	13					
JUN 24	12:10	22.0	6.29		36.0		DH59	9	657				
JUN 30	12:30	19.0	2.98		36.0		DH59	4					
JUL 03	14:20	18.0	2.51		36.0		DH59	9	669				
JUL 08	12:30	22.0	2.26		36.0		DH59	11					
JUL 16	13:30	24.0	1.27		36.0		DH59	9	669				
JUL 22	15:30	25.0	2.27		36.0		DH59	9	679				
SEP 03	16:10	18.0	8.15		36.0		DH59	16	514				
SEP 04	17:30	16.0	7.75		36.0		DH59	17					
SEP 08	18:00	12.0	6.02		36.0		DH59	10					
SEP 13	16:45	16.0	2.75		36.0		DH59	14	406				
SEP 16	19:00	14.0	2.78		36.0		DH59	15					
SEP 22	18:30	7.0	3.36		36.0		DH59	16	425				
SEP 27	17:10	8.0	4.22		36.0		DH59	12					
SEP 30	13:10	7.0	4.03		36.0		DH59	10	462				
OCT 02	18:10	7.0	3.64		36.0		DH59	10					
OCT 05	18:05	8.0	3.37		36.0		DH59	12					
OCT 09	17:30	9.0	3.71		36.0		DH59	11	489				
OCT 13	18:30	7.0	3.87		36.0		DH59	8					
OCT 18	18:00	9.0	4.33		36.0		DH59	4	458				
OCT 23	17:15	11.0	6.30		36.0		DH59	14	550				
OCT 28	16:15	8.5	7.34		36.0		DH59	15	533				
OCT 30	16:30	10.0	6.47		36.0		DH59	103					
NOV 01	17:00	8.0	5.08		36.0		DH59	121					
NOV 03	15:00	6.0	3.92		36.0		DH59	112					
NOV 05	18:30	3.0	2.82		36.0		DH59	136	587				
DEC 03	10:45	0.5	1.89	B	10RB	X	DIP	13	804				

NOTE : SINGLE VERTICAL LOCATED AT 36 METRES FOR 1985

DISCHARGE SYMBOL(S) B - ICE CONDITIONS H - DAILY MEAN W - DAILY MEAN; ICE CONDITIONS

VERTICAL SYMBOL(S) X - NOT AT REGULAR SINGLE SAMPLE VERTICAL M - A SEDIMENT MEASUREMENT VERTICAL
2 - A SEDIMENT MEASUREMENT VERTICAL NOT AT THE REGULAR MEASUREMENT CROSS-SECTION

SOURIS RIVER AT WAWANESA - STATION NO. 05NG001

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLES	CONCENTRATION MAXIMUM (mg/L)		CONCENTRATION MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)		SUMMARY MEAN LOAD (TONNES)	SUMMARY HISTORICAL MEAN LOAD (TONNES)	SUMMARY STANDARD ERROR OF MEAN %
1980	---CCCCCCCCC	MANUAL	211	DEC 12		5 MAY 13		82.5	DEC 12	1 750		---	---	---
1981	CCCCCCCCCCCC	MANUAL	149	JAN 16		5 DEC 22		80.4	MAR 20	2 270		6.23	6.23	---
1982	CCCCCCCCCCCC	MANUAL	850	APR 15	*	5 JUL 26		9 520	APR 15	* 42 700		117	61.8	89.9
1983	CCCCCCCCCCCC	MANUAL	481	APR 05		3 JAN 26		4 950	APR 05	87 700	*	185	103	90.6
1984	CCCCCCCCCCCC	MANUAL	136	DEC 13		5 SEP 26		66.8	MAR 24	4 350		11.9	80.0	54.1
1985	CCCCCCCCCCC	MANUAL	551	MAR 25		4 JUN 30	*	4 560	MAR 25	21 700		59.3	75.9	44.5

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH

* - EXTREME FOR PERIOD OF RECORD

MANITOBA

SOURIS RIVER NEAR COULTER - STATION NO. 05NP015

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 49 05 27 N LONG 100 57 12 W
DRAINAGE AREA: 43 200 km²
TYPE OF FLOW: REGULATED
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 5 170 TONNES FOR THE PERIOD JAN 01 TO DEC 31

REMARKS:

	JAN			FEB			MAR			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	0.272 S	66	1.55	0.202 B	44	0.77	0.713 B	10	0.62	1
2	0.256 B	65	1.44	0.193 B	36	0.60	0.802 B	11	0.76	2
3	0.231 B	64	1.28	0.193 B	29	0.48	0.829 B	10	0.72	3
4	0.241 B	64	1.33	0.186 B	21	0.34	0.939 B	10	0.81	4
5	0.246 B	63	1.34	0.175 B	15	0.23	0.989 B	11	0.94	5
6	0.241 B	62	1.28	0.136 B	11	0.13	1.03 B	13	1.16	6
7	0.265 B	61	1.40	0.099 B	11	0.09	1.02 B	12	1.06	7
8	0.237 B	61	1.25	0.065 B	10	0.06	0.875 B	12	1.01	8
9	0.218 B	58 S	1.11	0.054 B	10	0.05	0.826 B	12	0.86	9
10	0.224 B	59	1.14	0.038 B	10	0.03	0.900 B	12	0.93	10
11	0.240 B	58	1.20	0.017 B	10	0.01	0.897 B	13	1.01	11
12	0.262 B	57	1.29	0.008 B	9	0.01	1.05 B	20	1.81	12
13	0.273 B	57	1.34	0.006 B	9	0	1.26 B	35	3.81	13
14	0.250 B	57	1.23	0.002 B	9	0	2.05 B	50	8.86	14
15	0.221 B	57	1.09	0.002 B	9	0	3.47 B	59	17.7	15
16	0.227 B	57	1.12	0.003 B	9	0	5.30 B	82	33.7	16
17	0.242 B	57	1.19	0.020 B	9	0.02	9.47 B	63	51.5	17
18	0.273 B	57	1.34	0.019 B	8	0.01	12.9 B	62	69.1	18
19	0.260 B	57	1.28	0.040 B	9 S	0.03	13.6 B	63	74.0	19
20	0.281 B	56	1.36	0.082 B	9	0.06	12.4 B	54 S	57.9	20
21	0.284 B	56	1.37	0.122 B	10	0.11	9.83 B	38 S	32.3	21
22	0.314 B	57	1.57	0.155 B	10	0.13	6.84 B	50 S	29.5	22
23	0.284 B	57	1.40	0.230 B	10	0.20	8.77	50 S	37.9	23
24	0.259 B	56	1.25	0.319 B	11	0.30	11.2	78 S	75.6	24
25	0.242 B	56	1.17	0.437 B	11	0.42	10.6	80 S	73.3	25
26	0.246 B	55	1.17	0.454 B	11	0.43	10.6	74 S	67.8	26
27	0.260 B	54	1.21	0.529 B	11	0.60	13.0 B	65 S	73.0	27
28	0.261 B	53	1.15	0.548 B	11	0.62	9.82 B	110 S	93.3	28
29	0.262 B	53	1.20				11.6 B	138 S	136	29
30	0.237 B	52	1.08				14.8 B	131 S	169	30
31	0.216 B	51	0.95				13.8 B	124 S	148	31
TOTAL	5.819		39.07	4.414		5.62	193.280		1 261.96	TOTAL

	APR			MAY			JUN			
DAY	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAILY DISCHARGE (m³/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	13.0	89 S	100.0	14.6	43 S	54.2	13.0	26	29.2	1
2	12.2	59 S	62.2	14.5	44 S	55.1	13.3	28	32.2	2
3	12.4	61 S	65.4	15.2	36 S	47.3	13.0	29	32.6	3
4	12.1	65 S	68.0	15.2	31 S	40.7	12.9	29	32.3	4
5	11.7	79 S	79.8	15.5	30 S	40.2	13.0	30	33.7	5
6	11.2	86 S	83.2	15.0	28 S	36.3	12.7	30 S	32.9	6
7	11.3	73 S	71.3	15.2	27 S	35.5	12.6	30	32.7	7
8	11.4	68 S	67.0	15.3	27	35.7	12.4	30	32.1	8
9	7.37	74 S	47.1	15.0	28 S	36.3	12.8	29	32.1	9
10	4.67	81 S	32.7	14.3	30	37.1	12.5	26	28.1	10
11	4.23	78 S	28.9	14.8	34 S	43.5	12.2	23	24.2	11
12	4.09	83 S	32.9	15.2	41	53.8	12.4	21 S	22.5	12
13	4.10	103 S	36.5	15.4	47 S	62.5	12.2	20	21.1	13
14	3.70	144 S	46.0	14.7	32 S	40.6	11.5	20	20.0	14
15	3.81	198 S	85.2	14.2	24	29.4	11.8	20	20.4	15
16	3.83	192 S	83.5	14.3	24	29.7	11.4	26	25.6	16
17	3.32	189 S	54.2	14.2	24	29.4	9.61	42 S	34.5	17
18	3.80	127 S	38.4	14.1	24	29.2	8.80	43	25.3	18
19	3.49	96 S	28.9	13.5	24	28.0	3.92	42	14.2	19
20	4.29	98 S	36.3	13.7	24	28.4	2.35	42	8.53	20
21	3.72	100 S	32.1	13.5	23	26.8	2.17	42	7.87	21
22	3.63	97 S	30.4	13.2	23	26.2	2.24	42	8.13	22
23	3.61	105 S	32.7	13.4	24	27.8	2.29	42	8.31	23
24	4.80	114 S	47.3	13.1	24 S	27.2	2.24	42	8.13	24
25	12.9	113 S	126	12.9	24	26.7	1.43	42 S	5.19	25
26	16.4	64 S	90.7	13.5	23	26.8	1.21	32	3.35	26
27	17.9	44 S	68.0	13.6	23	27.0	1.05	20	1.81	27
28	17.8	66 S	102	13.5	22	25.7	1.13	18	1.76	28
29	15.3	75 S	99.1	13.3	22 S	25.3	1.22	18	1.90	29
30	14.9	52 S	66.8	13.2	23	25.2	1.06	18	1.65	30
31				13.4	25	26.9				31
TOTAL	256.65		1 802.8	440.5		1 087.5	238.42		582.32	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

SOURIS RIVER NEAR COULTER - STATION NO. 05NF015

SUSPENDED SEDIMENT FOR 1985

DAY	JUL DAILY DISCHARGE (m^3/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m^3/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	DAY
1	1.09	18	1.70	0.912	28	2.21	1.18	78	7.82	1
2	1.18	17	1.75	0.808	31	2.16	0.946	85	6.31	2
3	2.03	16 S	2.81	0.842	36	2.55	0.848	55	4.03	3
4	2.45	17	3.60	0.845	40 S	2.92	0.788	50 S	3.40	4
5	2.81	21	4.74	0.916	42	3.32	0.838	49	3.86	5
6	2.62	25	5.89	0.869	40	3.00	0.688	45	2.81	6
7	1.83	30	4.22	0.872	37	2.79	0.653	48	2.71	7
8	1.03	32 S	2.85	0.873	34 B	2.86	0.710	44 S	2.84	8
9	0.858	32	2.37	0.814	33 S	2.32	0.887	48	2.85	9
10	0.841	31	2.26	0.843	33	2.40	0.722	47	2.93	10
11	0.892	30	2.31	0.753	35	2.28	0.690	47	2.80	11
12	0.884	27	2.06	0.939	38	3.08	0.695	47	2.83	12
13	0.828	23 S	1.85	0.877	41	3.11	0.803	47 S	2.48	13
14	0.907	21	1.65	0.887	43 S	3.33	0.836	47	2.58	14
15	0.975	21	1.77	0.807	43	3.00	0.826	47	2.54	15
16	0.934	20	1.61	0.734	43	2.73	0.677	46	2.69	16
17	0.850	20 S	1.64	1.13	44	4.30	0.854	46	2.80	17
18	1.04	20	1.80	1.02	45	3.97	0.585	46 S	2.28	18
19	1.15	26	2.58	0.857	45 S	3.49	0.740	48	3.07	19
20	3.71	52	16.7	0.831	45	3.23	0.889	53	3.98	20
21	5.06	55	24.0	0.785	43	2.92	0.787	55	3.79	21
22	5.27	55 S	25.0	0.767	41	2.78	0.633	55 S	3.01	22
23	2.20	50	9.50	0.788	40 S	2.72	0.742	51	3.27	23
24	1.36	47	5.52	0.865	40	2.99	0.772	40	2.67	24
25	1.11	46	4.41	0.937	40	3.24	0.726	36 S	2.26	25
26	1.09	45 S	4.24	0.834	45	3.24	0.787	36	2.62	26
27	0.876	42	3.54	1.23	57 S	6.06	0.670	44	2.55	27
28	0.938	37	3.00	1.27	51	5.69	0.828	50	3.58	28
29	1.01	30	2.62	1.28	66	7.30	0.842	59	4.29	29
30	0.844	27	2.20	1.36	72	8.56	0.853	64 S	4.72	30
31	0.815	26 S	2.08	1.29	76 S	8.69				31
TOTAL	49.490		152.04	26.925		113.97	22.456		98.80	TOTAL

DAY	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	NOV DAILY DISCHARGE (m^3/s)	NOV MEAN CONCENTRATION (mg/L)	NOV DAILY LOAD (t)	DEC DAILY DISCHARGE (m^3/s)	DEC MEAN CONCENTRATION (mg/L)	DEC DAILY LOAD (t)	DAY
1	0.858	84	4.74	0.495	215	9.20	1.32 B	12	1.37	1
2	0.785	85	4.41	0.578	212	10.6	1.33 B	11	1.36	2
3	0.801	85	4.60	0.922	209	16.6	1.34 B	10	1.16	3
4	0.758	85	4.26	1.22	203 S	21.4	1.44 B	12	1.48	4
5	0.856	84	4.73	1.32	182 S	20.8	1.48 B	12	1.53	5
6	0.748	83 S	4.08	1.12 B	126	12.2	1.46 B	12	1.51	6
7	0.576	61	3.05	0.728 B	35	2.20	1.48 B	12	1.53	7
8	1.11	54	5.18	0.726 B	11	0.69	1.47 B	12	1.52	8
9	1.28	39	4.31	0.836 B	12	0.97	1.47 B	11 S	1.40	9
10	0.836	33	2.67	1.26 B	12	1.31	1.43 B	11	1.38	10
11	0.758	30 S	1.97	1.55 B	11	1.47	1.36 B	10	1.18	11
12	0.728	30	1.88	1.76 B	11	1.67	1.30 B	10	1.12	12
13	0.755	30	1.96	1.94 B	11	1.84	1.23 B	10	1.06	13
14	0.849	30	1.68	1.97 B	11	1.87	1.21 B	10	1.05	14
15	1.80	31	4.02	1.91 B	12	1.98	1.26 B	10	1.09	15
16	5.18	32 S	14.3	1.80 B	12	1.87	1.31 B	10	1.13	16
17	6.06	48	25.1	1.69 B	12	1.76	1.32 B	10	1.14	17
18	6.36	133	87.8	1.65 B	12	1.71	1.34 B	10	1.16	18
19	6.47	147	82.3	1.59 B	11	1.51	1.39 B	10	1.20	19
20	6.26	163 S	83.0	1.84 B	12	1.80	1.39 B	10	1.20	20
21	6.17	158	84.8	1.53 B	12	1.59	1.37 B	10	1.18	21
22	5.85	164	82.8	1.53 B	12	1.58	1.43 B	10	1.24	22
23	5.68	168	82.8	1.48 B	12	1.51	1.42 B	9	1.10	23
24	5.34	170 S	78.4	1.37 B	11	1.30	1.35 B	9	1.05	24
25	4.87	170	71.5	1.30 B	10	1.12	1.36 B	9	1.08	25
26	4.28	168	62.5	1.28 B	10	1.11	1.41 B	9	1.10	26
27	2.62	155	33.0	1.32 B	11	1.25	1.43 B	9	1.11	27
28	1.37	142	16.8	1.36 B	12	1.40	1.45 B	9	1.13	28
29	0.875	134 S	10.1	1.38 B	12	1.41	1.41 B	9	1.10	29
30	0.863	151	9.22	1.33 B	12	1.38	1.41 B	9	1.10	30
31	0.486	211 S	8.63				1.33 B	9	1.03	31
TOTAL	81.405		866.39	40.535		126.89	42.70		37.68	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

MANITOBA

SOURIS RIVER NEAR COULTER - STATION NO. 05NP015

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m³/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)		DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.063	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
JAN 09	13:41	0.5	0.214	B	MID		DH48	59		1310														
FEB 18	16:45	0.5	0.031	B	28.3	I	DH48	208	A	1430														
MAR 20	11:35	2.0	12.6	B	MID		DH59	84																
MAR 20	17:00	1.5	12.4	W	MID		DH59	39		199														
MAR 21	17:20	3.0	8.07	B	MID		DH59	29																
MAR 22	11:00	0.5	8.17	B	MID		DH59	91																
MAR 23	11:00	1.0	8.57		MID		DH59	48																
MAR 24	11:00	2.0	11.2		MID		DH59	81																
MAR 25	11:00	1.0	10.6		MID		DH59	76																
MAR 26	10:30	2.5	10.3		MID		DH59	75																
MAR 27	18:00	3.0	13.4	B	MID		DH59	61		234														
MAR 28	18:30	0.5	8.84	B	MID		DH59	136																
MAR 29	18:00	0.5	14.8	B	MID		DH59	136																
MAR 30	17:00	2.0	15.1	B	MID		DH59	129																
MAR 31	16:30	3.0	13.6	B	MID		DH59	124																
APR 01	17:30	2.0	13.2		MID		DH59	134	A															
APR 02	10:35	4.0	3.09		18.5	M	DH59	55																
APR 02	10:45	4.0	3.83		23.0	M	DH59	93		282														
APR 02	10:50	4.0	3.84		27.5	M	DH59	93		356														
APR 02	11:00	4.0	3.48		32.0	M	DH59	93		358														
APR 02	11:10	4.0	3.50		36.5	M	DH59	97		364														
APR 02	11:20	4.0	12.1		MID		DH59	97		381														
APR 02	18:00	1.0	11.5		MID		DH59	134	A															
APR 03	19:20	4.5	12.2		MID		DH59	65																
APR 04	18:30	5.5	11.7		MID		DH59	64																
APR 05	17:30	1.0	11.8		MID		DH59	85																
APR 06	17:00	0.5	11.1		MID		DH59	85																
APR 07	18:00	2.0	10.6		MID		DH59	87																
APR 08	17:30	5.0	11.8		MID		DH59	89																
APR 09	18:00	8.0	5.84		MID		DH59	75																
APR 10	18:30	9.0	4.66		MID		DH59	83		307														
APR 11	18:00	7.0	3.94		MID		DH59	77																
APR 12	18:00	8.0	4.48		MID		DH59	102																
APR 13	18:00	11.5	4.06		MID		DH59	103																
APR 14	18:30	15.0	2.93		MID		DH59	202																
APR 15	17:40	11.0	3.23		MID		DH59	196																
APR 16	12:00	6.0	4.04		MID		DH59	192																
APR 17	20:00	11.0	3.35		MID		DH59	187		303	12	37	67	87	95	97	98	100			3	80	37
APR 18	18:50	12.0	3.57		MID		DH59	88																
APR 19	18:00	9.0	3.38		MID		DH59	84																
APR 20	17:00	10.0	4.62		MID		DH59	99																
APR 21	09:30	8.5	3.79		MID		DH59	100		326														
APR 22	19:30	9.5	3.56		MID		DH59	86																
APR 23	19:00	10.0	3.57		MID		DH59	110																
APR 24	18:30	11.0	8.79		MID		DH59	118																
APR 25	18:30	11.0	14.1		MID		DH59	110																
APR 26	18:00	9.0	16.9		MID		DH59	45																
APR 27	18:00	14.0	17.7		MID		DH59	45		344														
APR 28	17:00	12.0	17.9		MID		DH59	72																
APR 29	19:15	11.0	14.5		MID		DH59	73																
APR 30	18:00	14.0	14.8		MID		DH59	48																
MAY 01	17:30	15.0	14.4		MID		DH59	42																
MAY 02	18:30	18.0	14.6		MID		DH59	46																
MAY 03	17:00	20.0	15.7		MID		DH59	32																
MAY 04	15:30	15.0	15.3		MID		DH59	31																
MAY 05	15:00	15.0	15.6		MID		DH59	30		407														
MAY 06	16:30	20.0	14.7		MID		DH59	27																
MAY 07	11:20	22.0	15.2		MID		DH59	27																
MAY 09	20:00	13.0	15.0		MID		DH59	29																
MAY 11	19:00	12.0	14.8		MID		DH59	35																
MAY 12	20:30	13.0	15.1		MID		DH59	48		463														
MAY 14	16:00	14.0	14.0		MID		DH59	25																
MAY 26	18:00	18.0	13.4		MID		DH59	24		512														
MAY 28	19:30	18.0	13.3		MID		DH59	22																
JUN 06	17:30	18.0	12.7		MID		DH59	31		500														
JUN 12	19:00	17.0	12.4		MID		DH59	22																
JUN 17	12:53	15.0	1.58		19.5	M	DH59	40		589														
JUN 17	13:05	15.0	1.80		23.5	M	DH59	44		666														
JUN 17	13:12	15.0	1.70		27.5	M	DH59	42		670														
JUN 17	13:17	15.0	1.81		31.5	M	DH59	43		670														
JUN 17	13:23	15.0	1.61		36.0	M	DH59	43		667														
JUN 17	13:30	15.0	8.28		MID		DH59	43		604														
JUN 25	21:00	15.0	1.38		MID		DH59	42		632														
JUL 03	12:30	24.0	2.11		MID		DH59	18		681														
JUL 08	19:00	20.0	0.905		MID		DH59	32																
JUL 13	20:00	21.0	0.849		MID		DH59	33		599														
JUL 17	19:30	19.0	0.916		MID		DH59	20																
JUL 22	19:20	22.0	4.76		MID		DH59	55		704														
JUL 26	20:00	24.0	1.09		MID		DH59	45																
JUL 31	10:10	22.0	0.813		MID		DH59	25		636														
AUG 04	19:30	21.0	0.846		MID		DH59	42																
AUG 09	20:00	20.0	0.862		MID		DHSJ	33		591														
AUG 14	12:27	16.0	0.906		MID		DH59	43																
AUG 18	19:30	20.0	0.833		MID		DH59	45		595														
AUG 23	19:30	18.0	0.734		MID		DH59	40																
AUG 27	18:00	20.0	1.31		MID		DH59	58		721														
AUG 31	19:30	19.5	1.36		MID		DH59	79																
SEP 04	10:00	16.0	0.785		MID		DH59	59		781														
SEP 06	18:00	16.0	0.656		MID		DH59	46																
SEP 13	18:30	17.0	0.593		MID		DH59	47		760														
SEP 18	18:00	5.0	0.476		MID		DH59	48																
SEP 22	18:45	4.0	0.618		MID		DH59	55		781														
SEP 25	09:30	5.0	0.713		MID		DH59	36																
SEP 30	16:00		0.832		MID		DH59	55		780														
OCT 05	17:30		0.744		WEAB	X	DIP	63		782														
OCT 11	17:00		0.752		WEAB	X	DIP	30																
OCT 16	17:30	5.0	5.55		MID		DH59	33		778														
OCT 20	14:30	15.0	8.29		MID		DH59	184																
OCT 24	18:30	10.0	5.30		MID		DH59	170		807														
OCT 29	11:55	4.5	0.693		MID		DH59	122																
OCT 31	17:30	4.0	0.481		MID		DH59	218		785	57	66	85	93	89	92	96	99	100		8	25	66
NOV 04	18:00	5.0	1.23		MID		DH59	201		780	53	57	88	94	94	95	98	100			4	29	67
NOV 05	10:50	5.0	1.34		MID		DH59	188		781														

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1985

DISCHARGE SYMBOL(S): B - ICE CONDITIONS W - DAILY MEAN, ICE CONDITIONS

CONCENTRATION SYMBOL(S) A - CLASSIFIED AS AN ANOMALY

VERTICAL SYMBOL(S): N - A SEDIMENT MEASUREMENT VERTICAL X - NOT AT REGULAR SINGLE SAMPLE VERTICAL

I - A SEDIMENT MEASUREMENT VERTICAL NOT AT THE REGULAR MEASUREMENT CROSS-SECTION

CONTINUED

SOURIS RIVER NEAR COULTER - STATION NO. 05NF015 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)		SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
DEC 09	14:30	0.5	1.47	B	MID	DH48	11	1150														

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1985

DISCHARGE SYMBOL(S): B - ICE CONDITIONS

SOURIS RIVER NEAR COULTER - STATION NO. 05NF015

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)			MINIMUM (mg/L)			SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)			TOTAL FOR PERIOD (TONNES)	SUMMARY MAR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1977	--CCCCCCCCCC	MANUAL	102	APR 14		12	SEP 05		11.7	MAR 14		425	1.80	1.80	---
1978	CCCCCCCCCCCC	MANUAL	80	APR 17		10	JUL 31		173	APR 17		3 820	15.5	8.55	81.3
1979	CCCCCCCCCCCC	MANUAL	174	JAN 23		9	JUN 08		614	MAY 25	*	22 200	* 87.7	34.9	76.5
1980	CCCCCCCCCCCC	MANUAL	401	MAR 20		8	JUN 04		183	APR 10		5 890	19.5	31.1	61.8
1981	CCCCCCCCCCCC	MANUAL	276	FEB 18		6	DEC 08		88.7	FEB 21		2 890	7.40	26.3	89.5
1982	CCCCCCCCCCCC	MANUAL	244	SEP 08		5	JUL 29		314	APR 24		8 880	33.3	37.5	46.7
1983	CCCCCCCCCCCC	MANUAL	229	NOV 03		4	MAY 07	*	211	OCT 23		10 400	35.5	28.6	38.1
1984	CCCCCCCCCCCC	MANUAL	488	APR 25	*	7	AUG 07		156	MAY 01		4 330	15.3	27.0	35.5
1985	CCCCCCCCCCCC	MANUAL	218	OCT 31		11	DEC 09		189	MAR 30		6 170	24.3	26.7	31.7

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH

* - EXTREME FOR PERIOD OF RECORD

MANITOBA

SOURIS RIVER NEAR LAUDER - STATION NO. 05NG025

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 49 24 00 N LONG 100 45 37 W
DRAINAGE AREA: 51 700 km²
TYPE OF FLOW: REGULATED
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 5 370 TONNES FOR THE PERIOD MAR 01 TO OCT 31

REMARKS:

DAY	MAR DAILY DISCHARGE (m³/s)	MAR MEAN CONCENTRATION (mg/L)	MAR DAILY LOAD (t)	APR DAILY DISCHARGE (m³/s)	APR MEAN CONCENTRATION (mg/L)	APR DAILY LOAD (t)	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	DAY
1	0.450 B	B	0.35	23.5	89 S	180	16.3	27 S	38.0	1
2	0.530 B	B	0.41	22.6	57 S	111	15.8	19 S	25.8	2
3	0.650 B	10	0.56	21.5	52 S	86.6	15.5	15	20.2	3
4	0.713 B	10	0.62	20.8	45 S	80.9	16.0	16 S	22.1	4
5	0.800 B	10	0.69	20.8	54 S	97.0	15.5	15 S	20.2	5
6	0.830 B	10	0.72	20.5	47 S	83.2	15.4	13 S	17.3	6
7	0.940 B	11	0.88	19.6	44 S	74.5	15.3	12 S	15.9	7
8	0.990 B	11	0.94	18.8	40 S	65.0	15.5	14 S	16.9	8
9	1.03 B	11	0.98	18.2	41 S	64.5	15.5	14 S	16.1	9
10	1.02 B	11	0.97	16.8	46 S	66.0	15.8	14	19.1	10
11	0.975 B	10	0.84	13.9	41 S	49.2	15.5	13 S	17.5	11
12	0.930 B	10	0.80	13.1	37 S	38.7	15.4	13	17.3	12
13	0.900 B	11	0.85	11.1	39 S	37.4	15.3	13	15.9	13
14	1.08 B	11	1.04	10 S	39 S	35.4	15.5	11	14.8	14
15	1.51 B	11	1.44	9.51	33	27.1	15.5	10 S	13.4	15
16	1.85 B	18	2.87	8.54	27 S	19.9	15.1	10	13.0	16
17	4.20 B	39	14.2	8.09	26 S	18.2	15.0	10 S	13.0	17
18	8.13 B	47	33.0	7.86	24	15.7	15.0	10 S	13.0	18
19	15.4 B	47	82.5	8.76	21 S	12.3	14.7	12 S	15.2	19
20	21.8 B	43 S	81.0	8.82	17 S	10.0	14.3	10 S	12.4	20
21	23.4 B	39 S	78.8	8.79	14 S	8.21	14.2	11	13.5	21
22	24.0 B	80	124	8.81	12	6.85	14.4	12 S	14.8	22
23	26.4 B	94 S	208	8.60	18	7.60	14.2	12 S	14.7	23
24	27.7 B	80 S	191	4.80	27 S	10.7	13.8	13 S	15.8	24
25	27.4 B	88 S	275	5.83	16 S	7.75	13.8	13 S	15.5	25
26	40.0 B	75 S	259	5.81	11 S	5.13	13.5	13	15.2	26
27	38.6 B	75 S	237	14.5	19 S	23.6	13.5	13 S	15.2	27
28	34.5 B	94 S	260	17.2	23 S	34.2	13.7	13 S	15.4	28
29	28.3 B	76 S	180	18.2	24 S	37.7	13.9	15	18.0	29
30	26.4 B	70 S	160	17.8	20 S	30.2	13.7	17 S	20.1	30
31	24.1 B	69 S	145				13.5	15	17.5	31
TOTAL	383.338		2 391.18	403.94		1 318.77	461.0		537.6	TOTAL

DAY	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	JUL DAILY DISCHARGE (m³/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m³/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	DAY
1	13.2	14 S	16.0	2.21	8	1.53	0.887	14 S	0.79	1
2	12.9	13	14.5	2.37	9	1.84	0.837	14	0.77	2
3	13.1	13 S	14.7	2.44	11	2.32	0.734	16	1.01	3
4	13.1	13	14.7	2.24	11 S	2.13	0.885	17	1.30	4
5	12.8	13	14.4	1.95	10 S	1.68	0.917	17	1.35	5
6	12.9	13	14.5	1.00	10	0.86	0.875	17	1.29	6
7	12.7	13 S	14.3	1.04	13	1.17	0.837	18	1.29	7
8	12.3	13	13.8	1.00	17	1.47	0.879	21 S	1.59	8
9	11.8	13	12.9	0.865	20 S	1.83	0.784	20	1.35	9
10	11.7	14	14.2	0.823	20	1.59	0.730	20	1.26	10
11	12.4	14 S	15.0	0.820	19	1.51	0.891	19	1.13	11
12	12.5	15	16.2	0.837	18	1.48	0.845	19	1.39	12
13	12.8	15 S	16.2	0.856	17	1.32	0.884	19	1.58	13
14	12.8	15	16.2	0.881	16 S	1.19	0.993	18 S	1.84	14
15	12.2	16	16.8	0.828	15	1.07	1.12	18 S	1.74	15
16	11.9	16 S	16.5	0.857	15	1.11	2.73	28	6.60	16
17	11.4	16 S	15.8	0.746	14	0.90	3.62	40	13.2	17
18	10.7	15	13.9	0.681	14	0.76	3.77	40 S	13.0	18
19	9.53	13	10.7	0.589	14	0.72	3.48	37	11.1	19
20	7.60	12	7.88	1.00	13 S	1.12	3.12	34	9.17	20
21	5.92	11 S	5.83	0.808	13	0.84	2.83	31	7.58	21
22	4.84	10	4.01	0.693	12	0.51	2.82	29	7.07	22
23	3.60	10	3.11	2.09	16	2.89	3.48	28	8.84	23
24	2.88	9	2.22	3.09	18 S	4.81	4.00	28	10.0	24
25	2.35	8	1.62	2.15	18	3.34	4.15	31 S	11.1	25
26	2.17	8 S	1.50	1.30	18	2.02	4.68	32	12.9	26
27	2.10	8	1.45	0.906	17	1.33	5.20	33	14.8	27
28	2.15	8	1.48	0.757	17	1.11	7.47	33	21.3	28
29	2.17	8	1.50	0.716	17 S	1.05	8.22	34	24.1	29
30	2.14	8 S	1.48	0.710	16	0.98	8.30	35	24.8	30
31				0.671	15	0.87	8.34	36 S	25.9	31
TOTAL	269.52		313.39	37.636		45.91	86.819		240.64	TOTAL

B - ICE CONDITIONS

S - SAMPLE(S) COLLECTED THIS DAY

SOURIS RIVER NEAR LAUDER - STATION NO. 05MG025

SUSPENDED SEDIMENT FOR 1985

DAY	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	DAILY DISCHARGE (m^3/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	7.77	33	22.2	2.61	14	3.16				1
2	6.83	31	18.8	2.54	14	3.07				2
3	6.30	30	16.3	2.50	14	3.02				3
4	5.73	28 S	13.9	2.47	13	2.77				4
5	5.61	28	13.3	2.38	13	2.68				5
6	4.66	26	10.2	2.57	13 S	2.88				
7	3.53	26	7.83	2.72	12	2.82				6
8	2.95	25 S	6.37	2.91	11	2.77				7
9	2.62	24	5.43	2.67	11 S	2.64				8
10	2.55	23	5.07	2.70	11	2.67				9
11	2.42	23	4.81	2.77	11	2.63				10
12	2.52	25	5.44	2.70	11	2.67				11
13	2.74	25 S	5.92	3.91	11 S	3.72				12
14	2.85	25	5.72	4.21	11	4.00				13
15	3.54	25	5.48	3.16	12	3.21				14
16	2.52	25	5.44	2.71	12 S	2.81				15
17	2.61	25 S	5.64	4.35	18	6.98				16
18	2.70	26	6.07	6.73	30	17.4				17
19	3.21	27	7.48	7.77	32	21.5				18
20	4.13	26 S	9.26	8.27	32 S	22.9				19
21	4.44	26	9.97	8.53	32	23.8				20
22	4.34	25	9.37	8.62	31	23.1				21
23	3.88	24	8.05	8.68	31	23.2				22
24	3.65	23 S	7.25	8.27	29	20.7				23
25	3.51	21	6.37	7.65	27	18.3				24
26	3.33	20	5.75	7.43	24	15.4				25
27	3.02	18	4.70	6.78	22	12.9				26
28	2.91	17	4.27	5.84	20 S	10.3				27
29	2.84	15 S	3.62	4.67	18	7.26				28
30	2.62	15	3.40	3.55	17	5.21				29
31				2.83	16 S	3.91				30
										31
TOTAL	110.83		243.13	145.66		279.46				TOTAL

S - SAMPLE(S) COLLECTED THIS DAY

MANITOBA

SOURIS RIVER NEAR LAUDER - STATION NO. 05NG025

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR 20	15:00	0.5	21.8	W	MID		DNS9	42	187														
MAR 21	10:15	0.5	23.4	W	MID		DNS9	40															
MAR 23	10:44	0.5	25.4	W	MID		DNS9	55															
MAR 24	16:30	0.5	27.7	W	MID		DNS9	75															
MAR 25	09:45	0.5	37.4	W	MID		DNS9	87															
MAR 26	15:45	0.5	40.0	W	MID		DNS9	71															
MAR 27	12:45	1.0	7.38	B	11.0	M	DNS9	75	185														
MAR 27	12:50	1.0	7.28	B	19.0	M	DNS9	73	186														
MAR 27	13:00	1.0	7.45	B	23.5	M	DNS9	74	180														
MAR 27	13:05	1.0	7.21	B	28.0	M	DNS9	74	186														
MAR 27	13:15	1.0	8.19	B	35.5	M	DNS9	71	188														
MAR 27	13:25	1.0	36.6	W	MID		DNS9	75	189														
MAR 28	10:45	0.5	34.5	W	MID		DNS9	101															
MAR 29	10:15	0.5	29.3	W	MID		DNS9	71															
MAR 29	17:30	0.5	29.3	W	MID		DNS9	78															
MAR 30	10:15	0.5	25.4	W	MID		DNS9	70															
MAR 30	15:30	2.0	26.4	W	MID		DNS9	85															
MAR 31	10:30	1.0	24.1	W	MID		DNS9	80															
MAR 31	15:30	2.0	24.1	W	MID		DNS9	101															
APR 01	07:15	1.0	23.7		MID		DNS9	76															
APR 01	15:45	4.0	23.3		MID		DNS9	58															
APR 02	07:20	3.0	22.6		MID		DNS9	59															
APR 02	16:35	4.5	22.5		MID		DNS9	56															
APR 03	07:15	4.0	21.7		MID		DNS9	56	250														
APR 03	17:50	5.0	21.2		MID		DNS9	48															
APR 04	10:00	5.0	20.8		MID		DNS9	45															
APR 05	09:15	4.0	20.6		MID		DNS9	56															
APR 05	11:15	5.0	20.5		MID		DNS9	46															
APR 07	14:00	3.0	19.5		MID		DNS9	44															
APR 08	17:15	4.0	18.6		MID		DNS9	39															
APR 09	16:45	5.0	18.1		MID		DNS9	84	A														
APR 10	16:30	5.0	15.2		MID		DNS9	47	297														
APR 11	16:45	5.0	13.4		MID		DNS9	38															
APR 12	17:45	5.0	11.7		MID		DNS9	37															
APR 13	16:40	9.0	10.9		MID		DNS9	40															
APR 14	13:45	11.0	10.4		MID		DNS9	222	A														
APR 16	19:00	9.0	8.32		MID		DNS9	26															
APR 17	14:00	9.5	8.08		MID		DNS9	28	299														
APR 18	17:15	10.0	5.86		MID		DNS9	30															
APR 20	17:00	11.0	5.89		MID		DNS9	77	A														
APR 21	19:00	11.0	5.78		MID		DNS9	13															
APR 24	17:10	13.0	4.78		MID		DNS9	29															
APR 25	16:30	12.0	5.75		MID		DNS9	11															
APR 26	17:45	12.0	11.0		MID		DNS9	12	340														
APR 27	16:45	12.0	15.3		MID		DNS9	21															
APR 28	16:15	14.0	17.7		MID		DNS9	24															
APR 29	16:05	14.0	18.4		MID		DNS9	23	353														
APR 30	15:45	15.0	17.2		MID		DNS9	18															
MAY 01	16:20	15.0	16.2		MID		DNS9	31															
MAY 02	16:30	16.0	15.6		MID		DNS9	18															
MAY 04	16:35	16.0	15.1		MID		DNS9	16															
MAY 05	17:45	15.0	15.4		MID		DNS9	15															
MAY 06	16:25	14.0	15.4		MID		DNS9	12															
MAY 07	16:30	14.0	15.3		MID		DNS9	13	389														
MAY 08	10:10	14.0	15.6		MID		DNS9	14															
MAY 09	19:10	15.0	15.8		MID		DNS9	112	A														
MAY 11	10:45	14.0	15.6		MID		DNS9	13															
MAY 15	15:00	13.0	15.6		MID		DNS9	10	490														
MAY 17	18:00	17.0	15.0		MID		DNS9	10															
MAY 18	18:30	18.0	15.0		MID		DNS9	11															
MAY 19	15:10	15.0	14.7		MID		DNS9	12															
MAY 20	15:30	18.0	14.2		MID		DNS9	10															
MAY 22	18:30	18.5	14.4		MID		DNS9	12	480														
MAY 23	15:15	20.0	14.3		MID		DNS9	12															
MAY 24	15:45	19.0	13.9		MID		DNS9	13															
MAY 25	15:50	17.0	13.6		MID		DNS9	13															
MAY 27	15:55	18.0	13.5		MID		DNS9	32	A														
MAY 28	19:05	16.0	13.6		MID		DNS9	13	504														
MAY 30	10:00	16.0	13.7		MID		DNS9	17															
JUN 01	15:00	16.0	13.2		MID		DNS9	13															
JUN 03	15:05	15.0	13.2		MID		DNS9	13	556														
JUN 07	15:10	20.0	12.6		MID		DNS9	13															
JUN 11	15:50	12.0	12.6		MID		DNS9	155	A	820													
JUN 13	15:40	18.5	12.8		MID		DNS9	15															
JUN 16	11:53	19.0	11.9		MID		DNS9	16															
JUN 17	16:15	18.0	2.11		12.0	M	DNS9	15	845														
JUN 17	16:20	18.0	2.01		20.0	M	DNS9	24	840														
JUN 17	16:25	18.0	2.69		25.0	M	DNS9	16	839														
JUN 17	16:30	18.0	2.46		30.0	M	DNS9	18	834														
JUN 17	16:35	18.0	2.39		36.5	M	DNS9	15	843														
JUN 17	16:45	18.0	11.2		MID		DNS9	16	841														
JUN 21	19:10	18.0	5.51		MID		DNS9	10															
JUN 28	21:30	16.0	2.13		MID		DNS9	8	851														
JUN 30	16:40	16.0	2.15		MID		DNS9	8															
JUL 04	12:40	23.0	2.21		MID		DNS9	11	852														
JUL 05	10:15	25.0	2.00		MID		DNS9	8															
JUL 09	19:25	25.0	0.938		MID		DNS9	20															
JUL 14	15:40	23.0	0.833		MID		DNS9	16	852														
JUL 20	14:25	22.0	1.02		MID		DNS9	13															
JUL 24	14:45	23.0	3.06		MID		DNS9	18	843														
JUL 29	10:10	21.0	0.731		MID		DNS9	17															
AUG 01	09:20	20.0	0.649		MID		DNS9	14	811														
AUG 08	19:15	23.0	0.682		MID		DNS9	20	576														
AUG 14	15:20	17.0	0.596		MID		DNS9	16															
AUG 15	10:05	16.0	0.951		MID		DNS9	17	525														
AUG 16	19:15	11.0	3.71		MID		DNS9	39															
AUG 25	12:10	10.0	4.13		MID		DNS9	31	488														
AUG 31	19:40	14.0	8.38		MID		DNS9	35	319														
SEP 04	16:10	14.5	5.67		MID		DNS9	27															
SEP 06	12:15	16.0	2.96		MID		DNS9	28	392														
SEP 13	19:25	15.5	3.78		MID		DNS9	25	445														
SEP 17	18:40	16.0	2.85		MID		DNS9	28															
SEP 20	18:25	12.0	4.27		MID		DNS9	28	489														

NOTE SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1985

DISCHARGE SYMBOL(S) B - ICE CONDITIONS W - DAILY MEAN; ICE CONDITIONS
CONCENTRATION SYMBOL(S) A - CLASSIFIED AS AN ANOMALY
VERTICAL SYMBOL(S): M - A SEDIMENT MEASUREMENT VERTICAL

CONTINUED

SOURIS RIVER NEAR LAUDER - STATION NO. 05NG025 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP.	INSTANT. DISCHARGE	SINGLE SAMPLING VERTICAL	TYPE OF SAMPLER	INSTANT CONCENT.	DISSOLVED SOLIDS	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES									PERCENT		
								.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	SAND	SILT	CLAY
		(C)	(m³/s)	(m)		(mg/L)	(mg/L)														
SEP 24	08:15	8.5	3.88	MID	DH59	23															
SEP 29	15:45	8.0	2.82	MID	DH59	15	430														
OCT 06	10:30	7.0	2.58	MID	DH59	12	499														
OCT 09	18:45	4.0	2.63	MID	DH59	11															
OCT 13	16:15	6.0	5.89	MID	DH59	11	531														
OCT 16	16:10	4.0	2.33	MID	DH59	12															
OCT 20	16:25	7.0	8.34	MID	DH59	32	712														
OCT 28	14:05	8.0	1.17	5.0 Z	DH48	19	687														
OCT 28	14:08	8.0	1.12	8.0 Z	DH48	19	706														
OCT 28	14:12	8.0	1.35	12.0 Z	DH48	18	696														
OCT 28	14:15	8.0	1.14	16.0 Z	DH48	17	704														
OCT 28	14:24	8.0	1.11	21.0 Z	DH48	20	712														
OCT 28	15:00	8.0	5.85	MID	DH59	19	706														
OCT 28	17:25	8.0	5.87	MID	DH59	19															
OCT 31	17:45	5.0	2.58	MID	DH59	18	725														

NOTE SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1985

VERTICAL SYMBOL(S) Z - A SEDIMENT MEASUREMENT VERTICAL NOT AT THE REGULAR MEASUREMENT CROSS-SECTION

SOURIS RIVER NEAR LAUDER - STATION NO. 05NG025

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM			SAMPLED CONCENTRATION MINIMUM			SUSPENDED SEDIMENT LOAD MAXIMUM DAILY			SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD	SUMMARY MAR-OCT MEAN LOAD	SUMMARY MAR-OCT HISTORICAL MEAN LOAD	SUMMARY MAR-OCT STANDARD ERROR OF MEAN %
	(JFMAMJJASOND)		(mg/L)			(mg/L)			(TONNES)			(TONNES)	(TONNES)	(TONNES)	
1983	--CCCCCCCCP-	MANUAL	80	APR 25		11	AUG 01		526	APR 25	*	15 500 *	83.2	83.2	---
1984	-PCCCCCCCC--	MANUAL	282	MAY 07	*	12	FEB 29		184	JUN 08		7 130	29.1	46.2	36.9
1985	--CCCCCCCC--	MANUAL	222	APR 14		8	JUN 26	*	280	MAR 28		5 370	21.9	36.1	33.4

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH P - PARTIAL MONTH * - EXTREME FOR PERIOD OF RECORD

MANITOBA

SOURIS RIVER NEAR MINTO - STATION NO. 05NG026

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (C)	INSTANT. DISCHARGE (m^3/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR 21	18:10	0.5		MID	DH59	23	437														
MAR 22	17:30	0.5		MID	DH59	75															
MAR 23	11:00	0.5		MID	DH59	122															
MAR 23	18:20	0.5		MID	DH59	141															
MAR 24	11:05	0.5		MID	DH59	117															
MAR 25	10:45	0.5		MID	DH59	112															
MAR 25	18:45	0.5		MID	DH59	134	162														
MAR 26	13:30	0.5		MID	DH59	106															
MAR 27	12:30	0.5		MID	DH59	87															
MAR 28	13:45	0.5		MID	DH59	64															
MAR 30	13:05	0.5		MID	DH59	74															
APR 01	11:00	0.5		MID	DH59	89															
APR 01	11:50	0.5		MID	DH59	78															
APR 02	17:40	0.5		MID	DH59	175	214														
APR 03	14:10	2.5		MID	DH59	102															
APR 04	18:05	3.5		MID	DH59	61															
APR 05	15:15	5.0		MID	DH59	56															
APR 06	13:10	5.5		MID	DH59	54															
APR 07	16:20	5.5		MID	DH59	51															
APR 08	17:15	5.5		MID	DH59	52	271														
APR 10	19:10	8.0		MID	DH59	47															
APR 12	10:55	7.0		MID	DH59	51															
APR 13	19:02	10.0		MID	DH59	39															
APR 14	18:00	12.0		MID	DH59	40															
APR 15	11:20	10.0		MID	DH59	37	326														
APR 17	17:20	11.5		MID	DH59	27															
APR 19	19:10	12.5		MID	DH59	23															
APR 20	19:35	12.5		MID	DH59	24															
APR 21	13:30	10.5		MID	DH59	20															
APR 23	17:10	15.0		MID	DH59	15	342														
APR 25	19:30	11.5		MID	DH59	12															
APR 26	18:55	13.0		MID	DH59	9															
APR 28	20:55	15.5		MID	DH59	18															
APR 29	10:45	15.0		MID	DH59	22															
MAY 01	11:20	15.0		MID	DH59	22	352														
MAY 02	10:55	15.0		MID	DH59	21															
MAY 04	08:45	16.0		MID	DH59	21															
MAY 05	09:25	14.0		MID	DH59	20															
MAY 06	11:00	8.0		MID	DH59	20															
MAY 08	06:05	14.0		MID	DH59	16	389														
MAY 11	12:50	16.5		MID	DH59	16															
MAY 13	14:10	12.5		MID	DH59	14															
MAY 15	08:35	11.5		MID	DH59	13	417														
MAY 18	07:40	16.0		MID	DH59	12															
MAY 20	08:35	14.5		MID	DH59	13															
MAY 22	09:40	18.0		MID	DH59	14	469														
MAY 25	13:45	17.5		MID	DH59	15															
MAY 28	09:40	15.0		MID	DH59	18															
MAY 28	10:20	16.0		MID	DH59	17	496														
MAY 30	13:35	17.0		MID	DH59	18															
JUN 01	14:30	15.0		MID	DH59	24															
JUN 04	13:40	15.0		MID	DH59	20															
JUN 06	12:00	18.0		MID	DH59	20	544														
JUN 09	17:20	18.0		MID	DH59	23															
JUN 12	11:55	18.0		MID	DH59	20	600														
JUN 14	18:50	19.0		MID	DH59	23															
JUN 17	16:45	17.5		MID	DH59	24															
JUN 19	08:40	17.5		MID	DH59	25	618														
JUN 22	17:25	19.0		MID	DH59	17															
JUN 24	10:05	18.0		MID	DH59	20															
JUN 26	11:25	16.5		MID	DH59	16	641														
JUN 29	13:15	15.0		MID	DH59	13															
JUL 02	09:35	21.0		MID	DH59	14	653														
JUL 05	07:40	20.5		MID	DH59	16															
JUL 10	19:35	25.5		MID	DH59	8	858														
JUL 15	12:20	23.0		MID	DH59	9															
JUL 19	09:55	19.0		MID	DH59	12	674														
JUL 25	20:10	21.5		MID	DH59	13															
JUL 28	20:15	20.0		MID	DH59	15	627														
JUL 30	10:45	20.0		MID	DH59	14															
AUG 02	09:50	19.5		MID	DH59	17	662														
AUG 05	12:05	23.0		MID	DH59	13															
AUG 10	15:10	17.0		MID	DH59	15	869														
AUG 15	17:20	20.0		MID	DH59	12															
AUG 19	09:45	13.5		MID	DH59	17	577														
AUG 23	09:05	17.5		MID	DH59	2															
AUG 28	11:45	20.0		MID	DH59	19	591														
AUG 30	10:30	17.5		MID	DH59	29															
SEP 03	12:05	18.0		MID	DH59	40	383														
SEP 07	14:45	14.0		MID	DH59	30															
SEP 11	10:25	13.0		MID	DH59	20															
SEP 14	09:20	14.5		MID	DH59	19	390														
SEP 17	09:30	15.0		MID	DH59	21															
SEP 21	17:05	11.0		MID	DH59	17	410														
SEP 24	13:05	8.0		MID	DH59	17															
SEP 27	12:45	7.0		MID	DH59	16															
OCT 01	09:50	5.5		MID	DH59	12	484														
OCT 08	13:15	9.0		MID	DH59	10															
OCT 09	17:25	2.5		MID	DH59	10	436														
OCT 12	18:00	6.5		MID	DH59	10															
OCT 16	17:30	2.0		MID	DH59	11	495														
OCT 20	07:55	5.5		MID	DH59	12															
OCT 23	12:45	8.5		MID	DH59	19	538														
OCT 27	12:20	6.5		MID	DH59	19															
OCT 30	14:40	5.0		MID	DH59	16	586														
NOV 03	14:30	4.0		MID	DH59	14															

NOTE : SINGLE VERTICAL LOCATED AT MID (MID STREAM) FOR 1985

MANITOBA

SOURIS RIVER NEAR MINTO - STATION NO. 05NL026

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)				SAMPLED CONCENTRATION MINIMUM (mg/L)				SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		SUSPENDED SEDIMENT LOAD TOTAL FOR PERIOD (TONNES)	SUMMARY : MAR-OCT MEAN LOAD (TONNES)	SUMMARY : MAR-OCT HISTORICAL MEAN LOAD (TONNES)	SUMMARY : MAR-OCT STANDARD ERROR OF MEAN %
1983	--CCCCCCCC--	MANUAL	280	APR 08	*		8	JUL 07			---	---	---	---	---	---
1984	--CCCCCCCC--	MANUAL	51	JUN 10			5	MAR 01	*		---	---	---	---	---	---
1985	--CCCCCCCCP-	MANUAL	175	APR 02			8	JUL 10			---	---	---	---	---	---

MANUAL - MANUAL SAMPLING

C - COMPLETE MONTH

P - PARTIAL MONTH

* - EXTREME FOR PERIOD OF RECORD

MANITOBA

VALLEY RIVER NEAR DAUPHIN - STATION NO. 05LJ010

SUSPENDED SEDIMENT FOR 1985

LOCATION: LAT 51 15 45 N LONG 100 00 39 W
DRAINAGE AREA 2 870 km²
TYPE OF FLOW: REGULATED
TYPE OF GAUGE: RECORDING

TOTAL SUSPENDED SEDIMENT LOAD 8 950 TONNES FOR THE PERIOD MAR 01 TO OCT 31

REMARKS:

DAY	MAR DAILY DISCHARGE (m³/s)	MAR MEAN CONCENTRATION (mg/L)	MAR DAILY LOAD (t)	APR DAILY DISCHARGE (m³/s)	APR MEAN CONCENTRATION (mg/L)	APR DAILY LOAD (t)	MAY DAILY DISCHARGE (m³/s)	MAY MEAN CONCENTRATION (mg/L)	MAY DAILY LOAD (t)	DAY
1	0.735 B	8	0.51	1.77 B	82	12.5	7.41 A	32 S	20.5	1
2	0.781 B	8	0.52	4.42 B	452 S	173	6.92 A	20 S	12.0	2
3	0.723 B	8	0.50	13.3 B	338 S	388	6.58 A	13	7.39	3
4	0.693 B	8	0.48	18.3 B	95 S	158	6.16 A	9 S	4.81	4
5	0.654 B	8	0.45	16.0 B	62 S	85.7	5.72 A	15 S	7.41	5
6	0.624 B	8	0.43	24.9 B	53 S	114	5.45 A	22	10.4	6
7	0.602 B	8	0.42	26.3 B	85 S	148	5.25 A	34 S	15.4	7
8	0.578 B	8	0.40	29.8 B	104 S	268	5.01 A	46	19.9	8
9	0.548 B	7	0.33	30.8 B	97 S	258	4.78 A	37 S	15.3	9
10	0.550 B	7	0.33	38.8 B	174 S	583	4.82	35	14.6	10
11	0.627 B	8	0.33	34.0	198 S	582	4.84	23 S	9.22	11
12	0.646 B	5	0.28	44.3	407 S	1 560	4.19	12	4.34	12
13	0.640 B	5	0.28	47.3	306 S	1 250	4.24	10	3.66	13
14	0.631 B	5	0.27	34.8	223 S	670	4.46	11	4.24	14
15	0.624 B	8	0.32	33.0	163 S	485	4.33	13	4.75	15
16	0.623 B	8	0.32	34.1	155 S	457	4.70	15 S	6.18	16
17	0.620 B	8	0.32	30.8	120 S	317	4.60	17	6.76	17
18	0.745 B	11	0.71	23.9	94 S	194	4.08	17 S	5.93	18
19	1.13 B	20	1.95	18.6	87 S	140	3.82	16	5.29	19
20	1.17 B	20	2.02	17.5	70 S	106	3.55	17	5.21	20
21	1.18 B	19	1.94	18.8	85 S	106	3.24	25 S	7.00	21
22	1.18 B	19	1.95	19.1	88 S	112	3.18	26	7.14	22
23	1.21 B	18	1.89	16.6	61 S	87.5	2.93	15 S	3.80	23
24	1.36 B	21	2.47	14.4	50 S	62.2	2.82	12	2.72	24
25	1.57 B	24	3.26	12.3	53 S	56.3	2.43	11	3.31	25
26	1.63 B	23 S	3.24	10.9	41	38.5	2.30	11	3.19	26
27	1.66 B	19	2.73	9.84 A	36	30.6	2.17	12	3.25	27
28	1.70 B	20	2.94	8.96 A	37 S	28.5	2.10	12	2.18	28
29	1.71 B	24	3.55	8.48 A	21 S	15.4	1.98	12 S	2.05	29
30	1.71 B	33	4.88	7.96 A	28 S	19.3	1.94	12 S	2.01	30
31	1.83 B	45	7.12				1.98	12	2.05	31
TOTAL	30.685		47.24	850.93		8 485.7	123.61		218.96	TOTAL

DAY	JUN DAILY DISCHARGE (m³/s)	JUN MEAN CONCENTRATION (mg/L)	JUN DAILY LOAD (t)	JUL DAILY DISCHARGE (m³/s)	JUL MEAN CONCENTRATION (mg/L)	JUL DAILY LOAD (t)	AUG DAILY DISCHARGE (m³/s)	AUG MEAN CONCENTRATION (mg/L)	AUG DAILY LOAD (t)	DAY
1	2.13	12	2.21	1.59	12	2.89	0.072	5	0.03	1
2	2.09	12	2.17	4.21	11 S	2.10	0.048	4	0.02	2
3	2.10	12	2.18	1.88	11	1.53	0.035	4	0.01	3
4	2.50	12	2.59	1.67	11 S	1.44	0.082	4	0.03	4
5	2.72	12 S	2.82	1.42	10 S	1.23	0.097	4	0.03	5
6	3.41	13 S	3.83	1.27	10	1.10	0.103	4	0.04	6
7	3.54	12 S	3.67	1.21	9	0.94	0.102	4 S	0.04	7
8	3.40	11	3.23	1.20	9	0.93	0.094	4	0.03	8
9	3.11	15 S	4.03	1.22	8	0.84	0.088	4	0.03	9
10	2.87	16	3.87	1.10	7	0.67	0.080	4	0.02	10
11	2.63	12 S	2.73	0.990	7 S	0.80	0.043	5	0.02	11
12	2.55	10	2.20	0.921	8 S	0.64	0.139	7	0.08	12
13	2.70	13	3.03	0.950	28 S	2.30	0.532	32 S	1.47	13
14	3.62	24 S	7.61	0.975	12	1.01	1.66	11 S	1.58	14
15	4.05	25 S	8.75	0.781	9 S	0.62	2.62	10 S	2.26	15
16	3.84	15 S	4.98	0.724	8	0.50	2.76	7 S	1.87	16
17	3.59	15 S	4.85	0.682	8 S	0.51	3.15	7 S	1.91	17
18	3.89	20	6.72	0.864	8	0.46	3.35	7 S	2.03	18
19	4.47	25 S	9.66	0.876	9	0.53	2.61	7 S	1.70	19
20	4.21	15 S	5.82	0.608	9 S	0.47	2.23	7 S	1.35	20
21	3.86	15 S	5.00	0.536	9	0.42	1.80	7 S	1.09	21
22	3.41	14	4.12	0.461	9	0.36	1.41	7 S	0.85	22
23	3.18	11 S	3.02	0.420	9	0.33	1.62	8 S	1.26	23
24	3.85	9	2.29	0.374	9	0.29	1.61	7 S	0.97	24
25	3.39	10	2.93	0.345	8	0.24	1.62	7	0.98	25
26	3.19	15 S	4.13	0.332	7	0.20	1.24	7	0.75	26
27	2.88	16	4.63	0.277	8	0.14	1.12	7 S	0.68	27
28	3.03	19 S	4.97	0.218	6 S	0.11	1.19	7	0.72	28
29	3.01	16	4.16	0.167	6	0.09	1.12	7	0.68	29
30	2.72	13 S	3.06	0.138	5	0.07	1.13	7	0.68	30
31				0.108	5 S	0.06	1.03	7	0.62	31
TOTAL	95.14		125.86	27.117		23.52	34.976		23.63	TOTAL

A - MANUAL GAUGE B - ICE CONDITIONS S - SAMPLE(S) COLLECTED THIS DAY

VALLEY RIVER NEAR DAUPHIN - STATION NO. 05LJ010

SUSPENDED SEDIMENT FOR 1985

DAY	SEP DAILY DISCHARGE (m^3/s)	SEP MEAN CONCENTRATION (mg/L)	SEP DAILY LOAD (t)	OCT DAILY DISCHARGE (m^3/s)	OCT MEAN CONCENTRATION (mg/L)	OCT DAILY LOAD (t)	DAILY DISCHARGE (m^3/s)	MEAN CONCENTRATION (mg/L)	DAILY LOAD (t)	DAY
1	0.993	7 S	0.60	3.21	3	0.83				
2	1.05	7	0.64	3.13	3	0.81				1
3	1.04	6	0.54	3.07	3	0.80				2
4	1.18	5 S	0.51	2.98	3 S	0.76				3
5	1.89	5 S	0.73	2.81	3	0.73				4
6	1.45	6 S	0.75	2.94	4 S	0.86				5
7	1.50	6 S	0.78	2.26	5	0.95				6
8	1.51	6 S	0.70	2.17	6	1.13				7
9	2.88	11	2.74	2.06	6	1.07				8
10	2.48	8	1.71	2.29	6	1.19				9
11	2.18	6	1.11	2.47	6	1.38				10
12	1.82	5 S	0.83	2.37	6	1.23				11
13	1.62	5	0.70	2.24	6	1.16				12
14	1.38	5	0.59	2.33	6	1.01				13
15	1.28	6	0.66	2.28	5	0.98				14
16	1.10	6	0.57	2.30	6	1.19				15
17	0.899	8	0.47	2.29	6	1.19				16
18	0.756	5 S	0.33	2.29	6	1.19				17
19	0.783	4	0.27	2.15	6	1.11				18
20	0.913	4 S	0.32	2.36	6	1.22				19
21	0.780	3	0.20	2.79	7	1.89				20
22	1.21	4	0.42	3.06	6	1.58				21
23	1.46	5	0.63	3.13	4	1.08				22
24	2.34	8	1.62	2.98	5	1.29				23
25	2.63	8	1.82	2.92	5	1.26				24
26	2.79	9	2.17	2.92	5	1.26				25
27	2.79	7	1.88	2.92	5	1.26				26
28	2.82	4 S	0.97	2.65	4	0.92				27
29	3.00	5	1.30	2.63	3	0.86				28
30	3.42	6	1.77	2.01	3	0.52				29
31				2.33 A	3 S	0.60				30
										31
TOTAL	51.894		28.13	79.84		32.88				TOTAL

A - MANUAL GAUGE

S - SAMPLE(S) COLLECTED THIS DAY

MANITOBA

VALLEY RIVER NEAR DAUPHIN - STATION NO. 05LJ010

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)		SINGLE SAMPLING VERTICAL (m)		TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
MAR 26	16:30	2.0	1.63	W	WELB	X	DIP	24	501														
APR 02	13:30	2.0	4.42	W	MID		DH59	220															
APR 02	19:00	0.5	4.42	W	MID		DH59	1060	320	17	21	37	52	85	94	98	100			6	72	21
APR 03	08:30	0.5	13.3	W	MID		DH59	128															
APR 03	15:00	1.5	13.3	W	MID		DH59	188	282														
APR 03	18:00	1.0	13.3	W	WELB	X	DIP	97															
APR 04	10:00	0.5	19.3	W	WELB	X	DIP	97															
APR 05	15:00	1.5	16.0	W	WELB	X	DIP	61															
APR 06	12:00	0.5	24.8	W	WELB	X	DIP	85															
APR 07	12:00	0.5	26.3	W	WELB	X	DIP	66															
APR 08	18:45	0.5	29.8	W	MID		DH59	127															
APR 09	09:15	0.5	30.8	W	MID		DH59	64															
APR 09	19:00	1.0	30.8	W	MID		DH59	134															
APR 10	09:00	0.5	38.8	W	MID		DH59	113															
APR 10	17:30	1.5	38.8	W	MID		DH59	273	242														
APR 11	11:00	2.0	30.4		MID		DH59	188															
APR 11	18:50	2.0	32.7		MID		DH59	193															
APR 12	09:20	0.5	42.8		MID		DH59	438	258	25	33	58	72	91	94	97	100			6	61	33
APR 12	19:00	1.5	43.5		MID		DH59	468															
APR 13	09:25	2.0	50.5		MID		DH59	300															
APR 13	16:05	5.0	8.86		10.7	M	D49	304	276	30	46	73	88	94	96	98	100			4	46	48
APR 13	16:14	5.0	15.7		15.3	M	D49	301	280	31	45	74	85	96	97	99	100			3	52	45
APR 13	16:23	5.0	12.6		20.0	M	D49	307	270	34	46	75	88	94	97	99	100			3	51	46
APR 13	16:32	5.0	8.13		24.7	M	D49	314	272	36	51	78	90	93	96	99	100			4	45	51
APR 13	16:40	5.0	2.05		29.3	M	D49	300	280	38	44	76	87	93	96	99	100			4	52	44
APR 13	17:00	5.0	44.0		MID		DH59	282	278	35	53	77	88	94	96	98	100			5	43	52
APR 13	19:30	5.0	41.7		MID		DH59	293															
APR 14	13:30	7.0	33.9		MID		DH59	219															
APR 14	19:00	11.0	31.5		MID		DH59	202															
APR 15	09:18	6.0	32.3		MID		DH59	169															
APR 15	19:45	6.0	34.6		MID		DH59	164															
APR 16	09:00	4.5	36.2		MID		DH59	172															
APR 16	19:00	5.0	33.7		MID		DH59	142															
APR 17	08:40	5.0	31.3		MID		DH59	121															
APR 17	17:00	8.5	28.4		MID		DH59	120															
APR 18	11:00	6.0	24.1		MID		DH59	103															
APR 18	17:00	5.0	22.6		MID		DH59	97															
APR 18	18:45	5.0	22.2		MID		DH59	93															
APR 19	10:30	8.0	18.4		MID		DH59	100	381														
APR 19	20:00	10.0	17.5		MID		DH59	79															
APR 20	11:00	9.0	17.1		MID		DH59	78															
APR 20	18:45	9.5	16.1		MID		DH59	69															
APR 21	10:42	8.0	16.7		MID		DH59	70															
APR 21	19:30	9.0	19.2		MID		DH59	66															
APR 22	08:50	7.0	18.5		MID		DH59	78															
APR 22	19:00	11.0	18.7		MID		DH59	87															
APR 23	09:05	8.0	16.7		MID		DH59	83															
APR 23	18:45	10.0	15.8		MID		DH59	62															
APR 24	09:00	9.0	14.5		MID		DH59	50	426														
APR 24	19:27	11.0	13.8		MID		DH59	49															
APR 25	07:15	8.0	12.8		MID		DH59	56															
APR 28	19:40	15.0	8.85	V	MID		DH59	38															
APR 29	09:00	13.0	8.48	V	MID		DH59	20															
APR 30	09:00	11.0	7.86	V	MID		DH59	29															
MAY 01	09:00	14.0	7.61	V	MID		DH59	34	461														
MAY 02	21:00	15.0	6.92	V	MID		DH59	15															
MAY 04	19:50	14.0	6.18	V	MID		DH59	13															
MAY 05	20:15	13.0	5.72	V	MID		DH59	16	436														
MAY 07	16:00	17.0	5.26	V	MID		DH59	37															
MAY 09	11:30	17.0	4.78	V	MID		DH59	35															
MAY 11	21:00	16.0	4.34		MID		DH59	16	446														
MAY 15	18:00	15.0	4.01		MID		DH59	15															
MAY 18	15:30	21.0	4.01		MID		DH59	17	413														
MAY 21	21:30	19.0	3.15		MID		DH59	29															
MAY 23	10:03	14.0	2.98		MID		DH59	15															
MAY 28	20:00	21.0	1.93		MID		DH59	12	433														
MAY 30	17:00	19.0	1.98		MID		DH59	12															
JUN 05	19:00	19.0	2.89		MID		DH59	12															
JUN 06	11:00	18.0	3.48		MID		DH59	13	371														
JUN 06	20:45	18.0	3.49		MID		DH59	13															
JUN 07	10:00	17.0	3.58		MID		DH59	12															
JUN 07	21:00	21.0	3.52		MID		DH59	11															
JUN 08	20:00	17.0	3.03		MID		DH59	16															
JUN 11	10:00	16.5	2.84		MID		DH59	12															
JUN 14	20:30	19.0	3.93		MID		DH59	31															
JUN 15	12:30	20.0	4.01		MID		DH59	33	488														
JUN 16	17:30	20.0	3.88		MID		DH59	14															
JUN 17	20:30	18.0	3.50		MID		DH59	18															
JUN 19	09:00	17.0	4.50		MID		DH59	29															
JUN 20	19:00	23.0	4.06		MID		DH59	15															
JUN 21	19:00	19.0	3.74		MID		DH59	15															
JUN 23	21:05	19.0	3.00		MID		DH59	10	521														
JUN 26	20:00	18.0	3.04		MID		DH59	18															
JUN 28	18:00	18.0	3.12		MID		DH59	19															
JUN 30	18:05	20.0	3.86		MID		DH59	13															
JUL 02	20:05	25.0	2.09		MID		DH59	11	503														
JUL 04	21:45	24.0	1.58		MID		DH59	10															
JUL 06	20:00	26.0	1.34		MID		DH59	10															
JUL 11	18:15	26.0	0.882		MID		DH59	7	386														
JUL 12	20:12	23.0	0.976		MID		DH59	8															
JUL 13	20:00	21.0	1.01		MID		DH59	57															
JUL 15	22:00	23.0	0.759		MID		DH59	8															
JUL 17	08:50	18.0	0.668		MID		DH59	8	389														
JUL 20	21:00	20.0	0.582		MID		DH59	9															
JUL 28	12:45	18.0	0.218		MID		DH59	8	421														
JUL 31	19:00	27.0	0.093		MID		DH59	5															
AUG 07	20:30	23.0	0.099		MID		DH59	4	381														
AUG 13	08:00	14.0	0.405		MID		DH59	21	327														
AUG 13	20:00	14.0	0.775		MID		DH59	33															
AUG 14	09:00	13.0	1.46		MID		DH59	8															
AUG 14	13:00	17.0	1.46		MID		DH59	7															
AUG 14	20:30		2.13		MID		DH59	122	C														

NOTE : SINGLE VERTICAL LOCATED AT 10RB (ONE QUARTER THE DISTANCE FROM THE RIGHT BANK) FOR 1985

DISCHARGE SYMBOL(S): V - DAILY MEAN, MANUAL GAUGE W - DAILY MEAN, ICE CONDITIONS
CONCENTRATION SYMBOL(S): C - COARSE MATERIAL PRESENT
VERTICAL SYMBOL(S): X - NOT AT REGULAR SINGLE SAMPLE VERTICAL M - A SEDIMENT MEASUREMENT VERTICAL

CONTINUED

VALLEY RIVER NEAR DAUPHIN - STATION NO. 05LJ010 (CONTINUED)

INSTANTANEOUS SUSPENDED SEDIMENT FOR 1985

DATE	TIME	WATER TEMP. (°C)	INSTANT. DISCHARGE (m^3/s)	SINGLE SAMPLING VERTICAL (m)	TYPE OF SAMPLER	INSTANT. CONCENT. (mg/L)	DISSOLVED SOLIDS (mg/L)	PERCENT FINER THAN INDICATED SIZE, IN MILLIMETRES .002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	PERCENT SAND	SILT	CLAY
AUG 15	08:30	14.0	3.80	MID	DH59	10															
AUG 15	13:50	16.0	2.75	MID	DH59	8															
AUG 15	14:45	16.0	0.566	2.1 M	DH48	8	330														
AUG 15	15:50	16.0	0.634	3.8 M	DH48	8	330														
AUG 15	16:55	16.0	0.732	5.4 M	DH48	8	328														
AUG 15	17:00	16.0	0.415	7.1 M	DH48	8	337														
AUG 15	17:05	16.0	0.214	8.8 M	DH48	9	339														
AUG 15	21:00	17.0	2.61	MID	DH59	8															
AUG 16	04:30	15.0	2.83	MID	DH59	9															
AUG 16	13:30	16.0	2.83	MID	DH59	5															
AUG 17	08:20	14.0	3.84	MID	DH59	7															
AUG 17	13:30	16.0	3.51	MID	DH59	8															
AUG 18	10:00	14.0	3.46	MID	DH59	8															
AUG 18	13:45	16.0	3.25	MID	DH59	6															
AUG 19	08:30	13.0	3.81	MID	DH59	7															
AUG 19	20:30	17.0	2.54	MID	DH59	7															
AUG 20	08:50	14.0	2.28	MID	DH59	7															
AUG 20	19:00	19.0	2.13	MID	DH59	7															
AUG 21	09:30	15.0	1.65	MID	DH59	7															
AUG 21	19:40	18.0	1.65	MID	DH59	7															
AUG 22	09:00	13.0	1.40	MID	DH59	7	461														
AUG 22	21:00	18.0	1.38	MID	DH59	6															
AUG 23	10:48	18.0	1.73	MID	DH59	10															
AUG 24	09:47	17.0	1.63	MID	DH59	7															
AUG 27	19:00	19.0	1.11	MID	DH59	7	463														
SEP 01	09:30	17.0	0.884	MID	DH59	7															
SEP 04	20:00	15.0	1.65	MID	DH59	5	454														
SEP 05	20:30	14.0	1.67	MID	DH59	6															
SEP 06	19:00		1.38	MID	DH59	6															
SEP 07	11:30	13.0	1.88	MID	DH59	6															
SEP 08	13:45	13.0	1.88	MID	DH59	4															
SEP 12	19:00	16.0	1.67	MID	DH59	5	359														
SEP 18	13:30	14.5	0.775	MID	DH59	5															
SEP 20	09:00	8.0	0.839	MID	DH59	4	358														
SEP 28	13:00	9.0	2.78	MID	DH59	4	420														
OCT 04	14:00	11.0	2.89	MID	DH59	3															
OCT 06	13:00	7.0	2.54	MID	DH59	4	457														
OCT 31	17:15		2.33 V	MID	DH59	3	470														

NOTE : SINGLE VERTICAL LOCATED AT 10RB (ONE QUARTER THE DISTANCE FROM THE RIGHT BANK) FOR 1985

DISCHARGE SYMBOL(S): V - DAILY MEAN, MANUAL GAUGE
VERTICAL SYMBOL(S): M - A SEDIMENT MEASUREMENT VERTICAL

VALLEY RIVER NEAR DAUPHIN - STATION NO. 05LJ010

HISTORICAL SEDIMENT DATA SUMMARY

YEAR	PERIOD OF OPERATION SUMMARY (JFMAMJJASOND)	TYPE OF SAMPLING	SAMPLED CONCENTRATION MAXIMUM (mg/L)		MINIMUM (mg/L)		SUSPENDED SEDIMENT LOAD MAXIMUM DAILY (TONNES)		TOTAL FOR PERIOD (TONNES)	SUMMARY : MAR-OCT MEAN LOAD (TONNES)	HISTORICAL MEAN LOAD (TONNES)	STANDARD ERROR OF MEAN %
1980	--EEEEEEEE--	MANUAL	304 APR 10		2 OCT 04		893 APR 10		4 200	17.2	17.2	---
1981	--EEEEEEEE--	MANUAL	357 JUL 04		3 OCT 29		1 210 JUL 04		2 150	8.78	13.0	32.5
1982	--EEEEEEEE--	MANUAL	72 APR 18		1 OCT 24	*	80.5 APR 18		483	1.97	9.31	47.3
1983	--EEEEEEEE--	MANUAL	780 APR 25		5 SEP 30		19 600 APR 25	*	45 200	* 184	53.0	82.6
1984	--EEEEEEEE--	MANUAL	208 JUN 26		3 OCT 30		529 JUN 26		4 170	17.0	45.8	75.7
1985	--EEEEEEEE--	MANUAL	1 080 APR 02	*	3 OCT 04		1 580 APR 12		8 990	36.7	44.3	84.0

MANUAL - MANUAL SAMPLING

E - COMPLETE MONTH * - EXTREME FOR PERIOD OF RECORD

WILSON CREEK NEAR MCCREARY - STATION NO. 05LJ801

MONTHLY AND ANNUAL TOTAL VOLUMETRIC BED LOAD IN CUBIC METRES

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	YEAR
1964	0	0	0	149	1170	11.0	4.0	2.0	2.0	0	0	0	1338.0	1964
1965	0	0	0	858	275	107	38.0	27.0	1490	27.0	0	0	2522.0	1965
1966	0	0	8.0	141	382	141	38.0	248	4.0	0	0	0	962.0	1966
1967	0	0	0	223	458	23.0	0	0	0	0	0	0	704.0	1967
1968	0	0	11.0	82.0	67.0	63.0	103	165	0	0	0	0	501.0	1968
1969	0	0	0	853	0	1120	57.0	0	0	0	0	0	2010.0	1969
1970	0	0	8.0	176	---	535	229	34.0	115	31.0	0	0	---	1970
1971	0	0	0	1320	1030	119	237	0	0	378	0	0	2984.0	1971
1972	0	0	0	336	237	0	0	0	0	0	0	0	573.0	1972
1973	0	0	0	86.0	103	203	0	74.0	122	151	0	0	749.0	1973
1974	0	0	0	903	214	0	0	0	0	0	0	0	1116.0	1974
MEAN	0	0	3.9	426	384	211	64.2	50.0	158	57.0	0	0	1350	MEAN

BED LOAD MEASURED BY VOLUMETRIC METHOD. MONTHLY DISTRIBUTION ESTIMATED.

STA. NO.	NAME	PAGE
05KJ001	SASKATCHEWAN RIVER AT THE PAS	44
05LJ010	VALLEY RIVER NEAR DAUPHIN	62
05LJ047	EDWARDS CREEK DRAIN BELOW JACKFISH CREEK	13
05LJ801	WILSON CREEK NEAR MCCREARY	65
05MM005	ASSINIBOINE RIVER NEAR HOLLAND	9
05MJ001	ASSINIBOINE RIVER AT HEADINGLEY	5
05NF002	ANTLER RIVER NEAR MELITA	1
05NF016	SOURIS RIVER NEAR COULTER	52
05NG001	SOURIS RIVER AT WAWANESA	48
05NG025	SOURIS RIVER NEAR LAUDER	56
05NG026	SOURIS RIVER NEAR MINTO	60
05OB007	PEMBINA RIVER NEAR WINDYGATES	20
05OC001	RED RIVER AT EMERSON	24
05OD001	ROSEAU RIVER NEAR DOMINION CITY	39
05OD004	ROSEAU RIVER AT GARDENTON	35
05OJ010	RED RIVER NEAR LOCKPORT	29
05TG003	ODEI RIVER NEAR THOMPSON	17

NAME	STA. NO.	PAGE
ANTLER RIVER NEAR MELITA	05NF002	1
ASSINIBOINE RIVER AT HEADINGLEY	05MJ001	5
ASSINIBOINE RIVER NEAR HOLLAND	05MH005	9
EDWARDS CREEK DRAIN BELOW JACKFISH CREEK	05LJ047	13
ODEI RIVER NEAR THOMPSON	05TC003	17
PEMBINA RIVER NEAR WINDYGATES	05GB007	20
RED RIVER AT EMERSON	05OC001	24
RED RIVER NEAR LOCKPORT	05OJ010	29
ROSEAU RIVER AT GARDENTON	05OD004	35
ROSEAU RIVER NEAR DOMINION CITY	05OD001	39
SASKATCHEWAN RIVER AT THE PAS	05KJ001	44
SOURIS RIVER AT WAWANESA	05NE001	48
SOURIS RIVER NEAR COULTER	05NF016	52
SOURIS RIVER NEAR LAUDER	05NG025	56
SOURIS RIVER NEAR MINTO	05NG026	60
VALLEY RIVER NEAR DAUPHIN	05LJ010	82
WILSON CREEK NEAR MCCREARY	05LJ801	86